

### Reconciliation Case Study

Presented by:

Mitch Hembree





### Project Number Reconciliation Case Study



NMMSS REPORT A-200



### **Case Study**

**Initial Facility Project Number Status:** 

Project Transaction

Project inventories derived from reported transactions

The A-200 report provides the status of project number balances at the time of physical inventory.

Project Numbers.

Central Nuclear Corporation (RIS BCD)

U. S. NUCLEAR MATERIALS MANAGEMENT AND SAFEGUARDS SYSTEM

COE

REPORT PERIOD DATE 09/30/2015 SUMMARY OF ENDING INVENTORY COMPARISON
CENTRAL NUCLEAR CORPORATION

VENTORY COMPARISON RUNTIME 10/15/2015 07:27:37
R CORPORATION

Difference >

Project No lement Weight Isotope Weight **Element Weight** Isotope Weight Isotope Weight **Element Weight** BCD, DEPLETED URANIUM 461 GCD10010UE 1.844 GCD100100R 1,844 GGE01110RM 613 613 2,918 TOTALS 2,918 BCD, ENRICHED URANIUM 4,200,575 GCD10010UE 76,990 4,200,275 76,986 300 GCD100100R 300,681 6,967 300,682 6.968 -1 GGE01110RM 631,430 9,547 631,729 9,550 -299 -3 GGE011100F 3,407 1,123 2,324 644 1,083 479 GGE011181R 11,662,282 343,651 11,662,282 343,651 **TOTALS** 16,798,375 438,278 437,799 1,083 16,797,292 479 BCD, ENRICHED LITHIUM GGE011181R 159,685 113,380 159,685 113,380 TOTALS 159,685 113,380 159,685 113.380 BCD, NORMAL URANIUM GCD10010UE 984 1,004 65 GGE01110RM **TOTALS** 1,049 1,049 BCD, PU-238 GCD10010UE 2.20 2.20 1.80 **TOTALS** 2.20 1.80 2.20 1.80

Project Number Reconciliation

Project inventories derived from reported physical inventory

Discrepancy between reported transactions and reported physical inventory

Project number quantities not reconciled with NMMSS





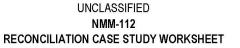
### **Case Study**

# Reconciliation Worksheet

Project inventories derived from reported transactions

Project Numbers

Non-reconciled data extracted from the A-200 report into the Reconciliation Case Study Worksheet



<b>■</b> GENERATED BOOK	INVENTORY	COEI		DIFFERI	ENCE _
Element Weight	Isotope Weight	Element Weight	Isotope Weight	Element Weight	Isotope Weig
		NORMAL UF			
PROJECT: GCD10010L	JE				
984		1,004		-20	
PROJECT: CGE01110F	RM .				
65		45		+20	
	-				
		ENRICHED U	RANIUM		
PROJECT: GCD10010L	1				
4,200,575	76,990	4,200,275	76,986	+300	
DO IFOT CODIONIO	<u> </u>				
PROJECT: GCD100100		000 000	2.000		
300,681	6,967	300,682	6,968	-1	
	+	+			
PROJECT: GGE01110F					
631,430	9,547	631,729	9,550	-299	
331,100	0,047	551,725	0,000	200	
PROJECT: GGE011100	)F				
3,407	1,123	2,324	644	+1083	+4

Project Number Reconciliation

Discrepancy between reported transactions and reported physical inventory

Project inventories derived from reported physical inventory

Project number quantities not reconciled with NMMSS





### **Case Study**

### Actions to Achieve Reconciliation with NMMSS

- Central Nuclear Corporation (RIS BCD) reported their ending inventory as of September 30, 2014. Normal uranium in the form of Process Residues (Unirradiated) (composition code 729) was incorrectly reported as 997 kilograms. The correct value is 977 kilograms. The material is in project Uranium Processing (GCD10010EU).
- BCD reported an ending inventory for normal uranium in the form of samples and standards (composition code 771). This inventory reflects quantities in inventory as of September 30, 2014. BCD reported a quantity of 45 kilograms in project Rough Machining Process Startup (GGE01110RM). The correct element weight is 65 kilograms. The form of the material and the project were originally reported correctly.
- During the process month of September 2014, BCD reported transaction 930301 to record their inventory difference for the current process month. Transaction 930301 consisted of only this one line. The material is enriched uranium. An element weight of 888 grams and an isotope weight of 10 grams (1.1261%) were reported. The correct element weight should be 1188 grams and the isotope weight should be 14 grams (1.1785%). The material is in project Uranium Processing (GCD10010UE). A clerical error was made in reporting the transaction to NMMSS.
- BCD received five items of enriched uranium from Advanced Biophysics Foundry (RIS ABF) on transaction 10. The material was received in the previous fiscal year. A recent laboratory analysis determined that an additional gram of both element and isotope was received. This material is in project Uranium Recovery (GCD100100R) and is in the form of standards (composition code 771). The document in error contained only one detail line. The element weight was 300,681 grams and the isotope weight was 6,967 grams.
- Extended Nuclear Enterprise (RIS EZY) made a shipment of one item of enriched uranium to BCD on transaction 422 in a previous process period. The element weight reported was one gram and the isotope weight was zero (0.7500%). BCD issued a corrected 741 document to reflect a change to both element and isotope weights. The element weight should be 300 grams and isotope weight should be 3 grams (1.0000%). The material is in project Rough Machining Process Startup (GGE01110RM) and in the form of In Other R&D Usage. The 741 provided to EZY was also incorrect.
- BCD reported (during the current reporting period) a gain (from other materials use code 22) for enriched uranium on transaction number 930331. The element weight was 477 grams and isotope weight was 270 grams (56.6038%). This gain was a result of the degradation of depleted uranium (use code 71). The depleted uranium was reported as zero kilograms element weight and zero kilograms isotope weight (0.1110%). Production personnel informed you that an error existed in their reported weights for the enriched uranium. The element weight should be 494 grams and the isotope weight should be 291 grams (58.9069%). The depleted uranium values did not change. The material is in the project Fabrication – General Account (GGE011100F) and in the form of hexafluoride product (composition code 103).
- BCD issued a corrected 741 document for a receipt of three items of enriched uranium from Midway Enrichment Manufacturing (MEM) on transaction 4, correction 1. The items are in the form of samples and standards (composition code 771). You discover an error on 741 sent to NMMSS. The element weight was entered as a negative 11 grams and the isotope weight was entered as a negative 10 grams (90.9091%) on the "Was" line (back out). The correct element weight is a negative 1,111 grams and correct isotope weight is a negative 510 grams (45.9046%). The 741 provided to Midway was correct, but keystroke errors were made in sending the data to NMMSS. The material is in project Fabrication – General Account (GGE011100F).

**Project Number** Reconciliation





### **Action 1**

- **Project Number** Reconciliation
- Central Nuclear Corporation (RIS BCD) reported their ending inventory as of September 30, 2014. Normal uranium in the form of Process Residues (Unirradiated) (composition code 729) was incorrectly reported as 307 kilograms. The correct value is 977 kilograms. The material is in project Uranium Processing (GCD10010EU).
- BCD reported an ending inventory for normal uranium in the form of samples and standards (composition code 771). This inventory reflects quantities in inventory as of September 30, 2014.

Central Nuclear Corporation (RIS BCD) reported their ending inventory as of September 30, 2014. Normal uranium in the form of residues to be leached (composition code 729) was incorrectly reported as 997 kilograms. The correct value is 977 kilograms. The material is in project Uranium Processing (GCD10010EU).

Identify the entry on the appropriate NMMSS report. Show the solution for correcting their entry with NMMSS. Complete a worksheet to display the results of the correcting entry.

- Extended Nuclear Enterprise (RIS EZY) made a shipment of one item of enriched uranium to BCD on transaction 422 in a previous process period. The element weight reported was one gram and the isotope weight was zero (0.7500%). BCD issued a corrected 741 document to reflect a change to both element and isotope weights. The element weight should be 300 grams and isotope weight should be 3 grams (1.0000%). The material is in project Rough Machining Process Startup (GGE01110RM) and in the form of In Other R&D Usage. The 741 provided to EZY was also incorrect.
- BCD reported (during the current reporting period) a gain (from other materials use code 22) for enriched uranium on transaction number 930331. The element weight was 477 grams and isotope weight was 270 grams (56.6038%). This gain was a result of the degradation of depleted uranium (use code 71). The depleted uranium was reported as zero kilograms element weight and zero kilograms isotope weight (0.1110%). Production personnel informed you that an error existed in their reported weights for the enriched uranium. The element weight should be 494 grams and the isotope weight should be 291 grams (58.9069%). The depleted uranium values did not change. The material is in the project Fabrication – General Account (GGE011100F) and in the form of hexafluoride product (composition code 103).
- BCD issued a corrected 741 document for a receipt of three items of enriched uranium from Midway Enrichment Manufacturing (MEM) on transaction 4, correction 1. The items are in the form of samples and standards (composition code 771). You discover an error on 741 sent to NMMSS. The element weight was entered as a negative 11 grams and the isotope weight was entered as a negative 10 grams (90.9091%) on the "Was" line (back out). The correct element weight is a negative 1,111 grams and correct isotope weight is a negative 510 grams (45.9046%). The 741 provided to Midway was correct, but keystroke errors were made in sending the data to NMMSS. The material is in project Fabrication – General Account (GGE011100F).





### **Solution:**

**Project Number Reconciliation** 

DOE/NRC Form 742C re-submitted to NMMSS with corrected element weight

(09-2014) U.S. DEPARTMENT OF ENERG								APPRO	VED BY OWIB: NO. 31	50-005	5				_∧	PIKES	. 08/3	31/2017
MANDAT AUTHORI	ORY DATA ZED BY 10 ,72, 74, 75, ws 83-703,			S. NUCLEAR RI HYSICAL IN			comments regarding burden estimate to the FOIA, Privacy, and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commis 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory											
NAME	AND AD	DRESS								2. REF	PORTING	IDENTIF	ICATION SY	MBOL (F	RIS)			
	l Nucle	ar Corporation RESS								BCI	O							
CITY					STATE	ZIP CODE		3. INVE	9/30/2014	4. LICE	ENSE NU	MBER(S	()					
			-			5.	BATC	H DAT	Ά									
a. MATERIAL TYPE	b. COMP/FAC 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	I. KEY MEASURE POINT	m. MEAS. BASIS	MEASUREMENT I OTHER MEAS. POINT	.D. MEAS. METHOD	n. ENTRY STATUS	o. MBA	p. SITE IDC	q. PROCESS CODE
81	729	977		GCD10010UE			G	1			7.3011							
81	725	1		GCDI00100E			G	2										
81	771	65		GGE01110RM			G	3										
81	899	1049						4										
			1				1	1 1								1 '	1 '	1





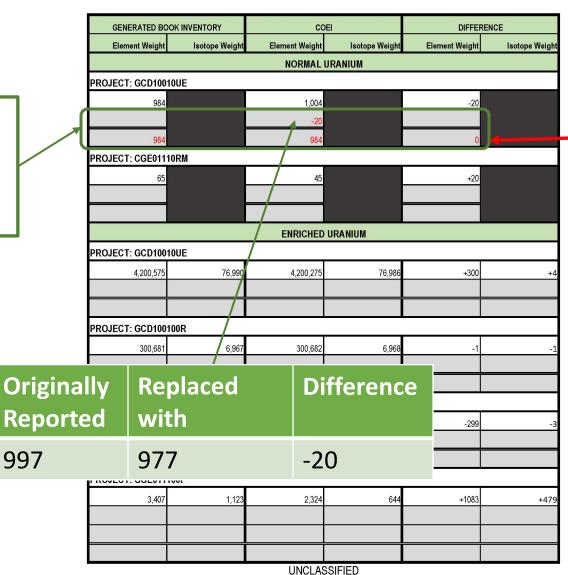


### **Solution:** (continued)

997

Reporting of the corrected DOE/NRC Form 742c (Physical Inventory Listing) impacted the reconciliation worksheet as follows:

#### UNCLASSIFIED NMM-112 RECONCILIATION CASE STUDY WORKSHEET



**Project Number** Reconciliation

Project GCD100100UE for normal uranium now reconciled with NMMSS.





### **Action 2**

- Central Nuclear Corporation (RIS BCD) reported their ending inventory as of September 30, 2014. Normal uranium in the form of Process Residues (Unirradiated) (composition code 729) was incorrectly reported as 997 kilograms. The correct value is 977 kilograms. The material is in project Uranium Processing (GCD10010EU).
- PCD reported an ending inventory for normal uranium in the form of samples and standards (composition code 771). This inventory reflects quantities in inventory as of September 30, 2014. BCD reported a quantity of 45 kilograms in project Rough Machining Process Startup (GGE01110RM). The correct element weight is 65 kilograms. The form of the material and the project were originally reported correctly.

**Project Number** Reconciliation

BCD reported an ending inventory for normal uranium in the form of samples and standards (composition code 771). This inventory reflects quantities in inventory as of September 30, 2014. BCD reported a quantity of 45 kilograms in project Rough Machining Process Startup (GGE01110RM).

The correct element weight is 65 kilograms. The form of the material and the project were originally reported correctly.

Identify the entry on the appropriate NMMSS report. Show the solution for correcting their entry with NMMSS. Complete a worksheet to display the results of the correcting entry.

- BCD reported (during the current reporting period) a gain (from other materials use code 22) for enriched uranium on transaction number 930331. The element weight was 477 grams and isotope weight was 270 grams (56.6038%). This gain was a result of the degradation of depleted uranium (use code 71). The depleted uranium was reported as zero kilograms element weight and zero kilograms isotope weight (0.1110%). Production personnel informed you that an error existed in their reported weights for the enriched uranium. The element weight should be 494 grams and the isotope weight should be 291 grams (58.9069%). The depleted uranium values did not change. The material is in the project Fabrication – General Account (GGE011100F) and in the form of hexafluoride product (composition code 103).
- BCD issued a corrected 741 document for a receipt of three items of enriched uranium from Midway Enrichment Manufacturing (MEM) on transaction 4, correction 1. The items are in the form of samples and standards (composition code 771). You discover an error on 741 sent to NMMSS. The element weight was entered as a negative 11 grams and the isotope weight was entered as a negative 10 grams (90.9091%) on the "Was" line (back out). The correct element weight is a negative 1,111 grams and correct isotope weight is a negative 510 grams (45.9046%). The 741 provided to Midway was correct, but keystroke errors were made in sending the data to NMMSS. The material is in project Fabrication – General Account (GGE011100F).

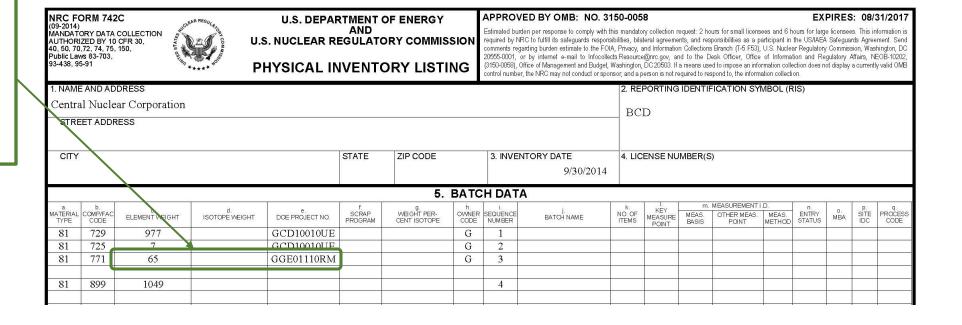




### **Solution:**

**Project Number Reconciliation** 

DOE/NRC Form 742C re-submitted to NMMSS with corrected element weight









### **Solution:** (continued)

Reporting of the corrected DOE/NRC Form 742c (Physical Inventory Listing) impacted the reconciliation worksheet as follows:

#### UNCLASSIFIED NMM-112 RECONCILIATION CASE STUDY WORKSHEET

1						
	GENERATED BO	OK INVENTORY	Co	DEI	DIFFER	RENCE
	Element Weight	Isotope Weight	Element Weight	Isotope Weight	Element Weight	Isotope Weight
			NORMAL	URANIUM		
	PROJECT: GCD100	IOUE				
	984		1,004		-20	
			-20			
	984		984		0	
	PROJECT: CGE011	IORM				
	65		45		+20	
			+20			
l u	65		65		0	J
_			ENRICHED	URANIUM		
	PROJECT: GCD100	10UE				
	4,200,575	76,999	4,200,275	76,986	+300	+4
Original	ly Po	placed		ifferenc		
Original	iy   Ke	placed		merenc	.e	-1
Reporte	d wit	th				
reporte						
45	65			20		
45	65		T2	20	-299	-3
	PROJECT: GGE011	100F				
	3,407	1,123	2,324	644	+1083	+479
	2,10,	.,,				

UNCLASSIFIED

**Project Number** Reconciliation

Project GGE01110RM for normal uranium now reconciled with NMMSS.





### Action 3

- Central Nuclear Corporation (RIS BCD) reported their ending inventory as of September 30, 2014. Normal uranium in the form of Process Residues (Unirradiated) (composition code 729) was incorrectly reported as 997 kilograms. The correct value is 977 kilograms. The material is in project Uranium Processing (GCD10010EU).
- BCD reported an ending inventory for normal uranium in the form of samples and standards (composition code 771). This inventory reflects quantities in inventory as of September 30, 2014. BCD reported a quantity of 45 kilograms in project Rough Machining Process Startup (GGE01110RM). The correct element weight is 65 kilograms. The form of the material and the project were originally reported correctly.
- During the process month of September 2014, BCD reported transaction 930301 to record their inventory difference for the current process month. Transaction 930301 consisted of only this one line. The material is emiched wanium. An element weight of 888 grams and an isotope weight of 10 grams (1.1261%) were reported. The correct element weight should be 1188 grams and the isotope weight should be 14 grams (1.1785%). The meterial is in project Uranium Processing (GCD10010UE). A clerical error was made in reporting the transaction to NMMSS.

**Project Number** Reconciliation

During the process month of September 2014, BCD reported transaction 930301 to record their inventory difference for the current process month. Transaction 930301 consisted of only this one line. The material is enriched uranium. An element weight of 888 grams and an isotope weight of 10 grams (1.1261%) were reported. The correct element weight should be 1188 grams and the isotope weight should be 14 grams (1.1785%). The material is in project Uranium Processing (GCD10010UE). A clerical error was made in reporting the transaction to NMMSS.

Identify the entry on the appropriate NMMSS report. Show the solution for correcting their entry with NMMSS. Complete a worksheet to display the results of the correcting entry.

> be 494 grams and the isotope weight should be 291 grams (58.9069%). The depleted uranium values did not change. The material is in the project Fabrication – General Account (GGE011100F) and in the form of hexafluoride product (composition code 103).

BCD issued a corrected 741 document for a receipt of three items of enriched uranium from Midway Enrichment Manufacturing (MEM) on transaction 4, correction 1. The items are in the form of samples and standards (composition code 771). You discover an error on 741 sent to NMMSS. The element weight was entered as a negative 11 grams and the isotope weight was entered as a negative 10 grams (90.9091%) on the "Was" line (back out). The correct element weight is a negative 1,111 grams and correct isotope weight is a negative 510 grams (45.9046%). The 741 provided to Midway was correct, but keystroke errors were made in sending the data to NMMSS. The material is in project Fabrication - General Account (GGE011100F).





3

### **Solution:**

**Project Number Reconciliation** 

DOE/NRC Form
741 replacement
reported to
NMMSS with
corrected
quantities

DOE/NRC (04-2018) Pri MANDATOR' AUTHORIZEI Public Laws 8	evious edition Y DATA CO O BY 10 CF	ons are obso LLECTION R 30, 40, 50 138, 95-91	0, 70, 72, 74, 75, 150	TERIAL TI	RAN		U.S. DEP NUCLEAR	REGU	ND ILATOI			SSION	Es inf Se Co Info 20:	timate ormati nd cor mmissi ormatic 503 If		esponse to co I for IAEA acc ng burden esti n, DC 20555-00 bry Affairs, NEC to impose an in	mply wi counting mate to 001, or 0B-1020	th this may reports the Informall 2, (3150-0 on collect		ection request: changes in invi- es Branch (T-2 s@nrc.gov, and of Management display a curren respond to, the		nd 15 nucle . Nucle esk Off get, Wa )MB cr	minute ear ma ear Re ficer, C ashingt ontrol r	es. This sterials gulatory office of on, DC number
1. SHIPPER	'S RIS	2. RECE	IVER'S RIS	3. TRANSACTION NO.	4, C0	ORRECTION NO.		5. PROCES	SSING COD	E				6. AC	TION CODE			7. D	OCUMENTATION (	Only if document is clas	sified SECRE	T)		
BCD		BCD	930	0301			a.SHIPPER C		b. RECEIV	ÆR		a. SHIP	PER M		b. RECEIVER	PAGE		OF	PAGES COP	/ OF	COPIES	SERIES		
8.a. NAME AND ADD OF SHIPPER	DRESS I	b. LICENSE NO.	, and the second	9.a. NAME AND ADDRESS OF RECEIVER	b. LICEN: NO.	SE			10. NO OF	DATA LINE	s 1					11. NATURE OF TR	RANSACTIO	N.			NO.	ISTRIBU	TION OF	COPIES
				- 21107-2211-00					12.a. SHIF	PED FOR A	CCOUN.	T OF b. i	RIS			13.a. SHIPPED TO	ACCOUNT	OF	b. RIS		1			
																9					2			
																					3			
																					4			
c. ATTENTION:				c. ATTENTION:																	5			
d. TELEPHONE:				d. TELEPHONE:												,					6			
14. TRANSFER	AUTHORITY -	CONTRACT,	NM DRAFT, OR ORDER	NUMBER						15.EXP OF	RT OR IN	IPORT TR	ANSFERS	LICENS	SE NO.									
16. MATERIAL T	IVDE AND DE	SCRIPTION								- 121		0.20			10	-			21.					
TO THE TENE										17. LINE NUMBER	C	18. COUNTRY OBLIGATIO	OF		19. MATERIAL TYPE	20. OBLIGATE ELEMENT WE	D	OBLIG:	ATED ISOTOPE WEIGHT		8			
										NUMBER		OBLIGATIO	ON		TYPE	ELEMENT WE	IGHT	For Enric	hed Uranium Only		9	LONT	DAY	YE AR
																				22. ACTION	DATE	(MM)	(DD)	(YYYY)
																				a. SHIPMENT		09	30	2014
23a. MISCELLAI	NEOUS				b.	CONCISE NOTE ATTAC	MED													b. SHIPPER'S CORI	RECTION			
						c. UK REPORTAB	LE? Y	ES	NO											c. RECEIPT				
							1,3——3,1													d. RECEIVER'S ME.	ASUREMENT			
																				e. RECEIVER'S COI	RRECTION			
										24. TOTAL	GROSS	WEIGHT	\					25. TOTAL	VOLUME (Waste 7	ran sfers Only)				
BAC REFERE NUMB	NCE NC	OF INV. CHANGE	IDENTIFIC (ITEM/BATC	CH NAME)	NO.OF ITEMS	PROJE( NUMBE	R	MATE- RIAL TYPE	COMP/ FACILITY CODE		KEY MEAS. POINT	1	AS.IDENT	3	GROSS WEIGHT	NET WEIGHT	EL	EMENT ÆIGHT	ELEMENT LIMIT OF ERROR	WEIGHT % ISOTOPE	ISOTO WEIGH	PE T	ISOT LIMI ERI	OPE T OF ROR
SHIPPER'S DATA		1 77	u.		е.	GCD10010U	JE	20	- 0.	G	-1-	BASIS	OMP N	METHOD	Jr		118	88		1.1785	14			
ပ္သ																								
<u> </u>																								
፟፟፟፟፟፟																								
<u>ა</u>																1								
26.																				-				
XXX													$\dashv$	-			+							
<b>†</b> † †	26s. SHII	PPER'S DA	TA SIGNAT	TURE OF AUTHORIZED O	DFFICIAL	I . AND DATE SIGNEI	0	1			-	1 2	27s. RE	CEIVE	ER'S DATA		SIC	NATURE (	I DF AUTHORIZE	L D OFFICIAL AND I	L DATE SIGN	ED		
						f				*	•	*					1		1	1				
14	1	1		1	- 1	I		1	II.	1 L	- 1		- 1	- 1		1	- 1		I .	1	II.			







### **Solution:**

Replaced with

1188 element

-4

14 isotope

Reporting of the replacement DOE/NRC Form 741 (Nuclear Material Transaction Report) impacted the reconciliation worksheet as follows:

**Originally** 

Reported

888 element

### UNCLASSIFIED NMM-112 RECONCILIATION CASE STUDY WORKSHEET

GENERATED BOOK	INVENTORY	COEI		DIFFEREN	ICE
Element Weight	Isotope Weight	Element Weight	Isotope Weight	Element Weight	Isotope Weight
		NORMAL UR	ANIUM		
ROJECT: GCD10010U	IE				
984		1,004		-20	
		-20			
984		984		0	
ROJECT: CGE01110R	·M				
65		45		+20	
		+20			
65		65		0	
		ENRICHED UP	RANIUM		
ROJECT: GCD10010U	IE				
4.200.575	76.990	4.200.275	76.986	+300	+4
-300	-4				
4,200,275	76,986	4,200,275	76,986	0	0
ROJECT: GCD100100	R				
300,681	6,967	300,682	6,968	-1	-1
ROJECT: GGE01110R	rM				
Differe	212.00	631,729	9,550	-299	-3
Differe	ence				
-300		2,324	644	+1083	+479
-300					

Project Number Reconciliation

Project GCD10010UE for enriched uranium now reconciled with NMMSS.



UNCLASSIFIED





### Action 4

- Central Nuclear Corporation (RIS BCD) reported their ending inventory as of September 30, 2014. Normal uranium in the form of Process Residues (Unirradiated) (composition code 729) was incorrectly reported as 997 kilograms. The correct value is 977 kilograms. The material is in project Uranium Processing (GCD10010EU).
- BCD reported an ending inventory for normal uranium in the form of samples and standards (composition code 771). This inventory reflects quantities in inventory as of September 30, 2014. BCD reported a quantity of 45 kilograms in project Rough Machining Process Startup (GGE01110RM). The correct element weight is 65 kilograms. The form of the material and the project were originally reported correctly.
- During the process month of September 2014, BCD reported transaction 930301 to record their inventory difference for the current process month. Transaction 930301 consisted of only this one line. The material is enriched uranium. An element weight of 888 grams and an isotope weight of 10 grams (1.1261%) were reported. The correct element weight should be 1188 grams and the isotope weight should be 14 grams (1.1785%). The material is in project Uranium Processing (GCD10010UE). A clerical error was made in reporting the transaction to NMMSS.
- BCD received five items of enriched uranium from Advanced Biophysics Foundry (RIS ABF) on transaction 10. The material was received in the previous fiscal year. A recent laboratory analysis determined that an additional gram of both element and isotope was received. This material is in project Uranium Recovery (GCD100100R) and is in the form of standards (composition code 771). The document in error contained only one detail line. The element weight was 300,681 grams and the isotope weight was 6,967 grams.

**Project Number** Reconciliation

BCD received five items of enriched uranium from Advanced Biophysics Foundry (RIS ABF) on transaction 10. The material was received in the previous fiscal year. A recent laboratory analysis determined that an additional gram of both element and isotope was received. This material is in project Uranium Recovery (GCD100100R) and is in the form of standards (composition code 771).

The document in error contained only one detail line. The element weight was 300,681 grams and the isotope weight was 6,967 grams.

Identify the entry on the appropriate NMMSS report. Show the solution for correcting their entry with NMMSS. Complete a worksheet to display the results of the correcting entry.

> (45.9046%). The 741 provided to Midway was correct, but keystroke errors were made in sending the data to NMMSS. The material is in project Fabrication – General Account (GGE011100F).

Developed by:

Populate the reconciliation worksheet based on the seven actions listed above.



4

### **Solution:**

**Project Number Reconciliation** 

DOE/NRC Form 741 adjustment reported to NMMSS with corrected quantities

DOE/NRC FORI (04-2018) Previous a MANDATORY DATA AUTHORIZED BY 10 Public Laws 83-703,	editions are obs COLLECTION CFR 30, 40, 5 93-438, 95-91	0, 70, 72, 74, 75	5, 150, MATERIAL	TRAI		U.S. DEI NUCLEAF ON RE	A R REGU	ND LATOI			N Es	stimated formation end com ommission formation	I burden per re on is required nments regardir on, Washington n and Regulato	B: NO. 3150 esponse to comp for IAEA accong burden estima , DC 20555-000 ny Affairs, NEOB o impose an infet or sponsor, an	ply with unting ate to t 1, or b 3-10202	reports he Inform y e-mail t G150-0	that show cl nation Service to infocollects 003) Office c	hanges in investigations in the contract of th	entory of F43), U.S to the De and Budo	nd 15 nucle Nuclesk Of net Wi	minut ear m ear Re ficer, ashino	es. Thi aterials egulator Office of aton. Di
1. SHIPPER'S RIS	2. REC	EIVER'S RIS	3. TRANSACTION NO.	4, (	CORRECTION NO.		5. PROCES	SING COD	E			6. ACT	TION CODE			7. DC	OCUMENTATION (C	Only if document is clas	sified SECRE	T)		
ABF	BCD		10	1		a. SHIPPER		b. RECEIN	ER A	a. SH	IIPPER		b.RECEIVER D	PAGE		OF	PAGES COPY	OF	COPIES	SERIES	3	
8.a. NAME AND ADDRESS OF SHIPPER	b. LICENSE. NO.		9.a. NAME AND ADDRE OF RECEIVER	SS b.LICEI	NSE.				DATA LINE					11. NATURE OF TRAN	NSACTION	Ţ.			NO. D	ISTRIBU	JTION OF	COPIES
	-		SETTINGS WEST TREATING					12.a. SHIP	PED FOR A	ACCOUNT OF	b.RIS			13.a. SHIPPED TO AC	COUNT C	E	b. RIS		1			
										<u></u>									2			
																			3			
																			4			
c. ATTENTION:			c. ATTENTION:																5			
d. TELEPHONE:			d. TELEPHONE:						20										6			
14. TRANSFER AUTHOR	ITY - CONTRACT	, NM DRAFT, OR 0	ORDER NUMBER						15. EXP O	RT OR IMPORT 1	TRANSFER:	S: LICENSE	ENO.						7			
16. MATERIAL TYPE AND	) DESCRIPTION								- 22				100	12.0			21.		-			
10. MATERIAL THE ARE	DESCRIPTION								17. LINE NUMBER	18. COUNTR OBLIGA		5	19. MATERIAL TYPE	20. OBLIGATED	l Seta		TED ISOTOPE WEIGHT		8			
									NUMBER	OBLIGA	TION		TYPE	ELEMENT WEIG	нт	For Enrich	ned Uranium Only		9	Lane	بده اد	Lean
												-						22. ACTION	DATE	(MM)	(DD)	YE AR (YYYY)
																		a. SHIPMENT				
23a. MISCELLANEOUS				b	. CONCISE NOTE ATTA	CHED												b. SHIPPER'S COR	RECTION			
					c. UK REPORTA	BLE?	YES	NO										c. RECEIPT				
														ÿ				d. RECEIVER'S ME.	ASUREMENT			
																		e. RECEIVER'S CO	RRECTION	09	30	2014
									24. TOTAL	L GROSSWEIGH	IT					25. TOTAL \	VOLUME (Waste Tra	an sfers Only)				
BACK REFERENCE	LINE TYPE		DENTIFICATION	NO. OF	PROJE	СТ	MATE-	COMP/	OWNER	KEY N MEAS.	ME AS, IDEN	VT.	GROSS WEIGHT	NET WEIGHT	ELE	MENT	ELEMENT LIMIT OF	WEIGHT %	ISOTOF	E	isc	TOPE IIT OF
NUMBER	NO. OF INV. CHANGE	018	EM (BATCH NAME)	ITEMS	NUMB	EK	TYPE	CODE	CODE	POINT 1	2	3			VVE	IGHT	ERROR	ISOTOPE	WEIGH			ROR
DATA	b. c.		d.	e.	10		g.	h.	- 6	J. BASIS		METHOD	I.	m.		n.	0.	p.	q.			r.
<u> </u>											-											
SHIPPER'S				-						-		-										
W							+															
<b>  \( \)</b>											+											
				+						-												
26.																						
8																						
↑ ↑ ↑ <sup>26s. 5</sup>	SHIPPER'S DA	TA S	GIGNATURE OF AUTHORIZ	ED OFFICIAI	AND DATE SIGNE	D				. 1 1	27s. P	ECEIVE	R'S DATA		SIGN	NATURE O	F AUTHORIZE	OFFICIAL AND I	DATE SIGN	ED		
				T					Ť		T									1	_	
S DATA	1			-5	GCD10010	0R	20	771	G						-300	681		2.3171	-6967		<b>1</b>	
J S.	2			5	GCD10010	0R	20	771	G						3000	582		2.3174	6968		T	
i <u>c</u>																						





### **Solution:**

Reporting of the adjustment DOE/NRC Form 741 (Nuclear Material Transaction Report) impacted the reconciliation worksheet as follows:

**Originally** 

Reported

#### UNCLASSIFIED NMM-112 RECONCILIATION CASE STUDY WORKSHEET

GENERATED BOOK INVENTORY COEL DIFFERENCE **Element Weight Element Weight** Isotope Weig **NORMAL URANIUM** PROJECT: GCD10010UE PROJECT: CGE01110RM **ENRICHED URANIUM** PROJECT: GCD10010UE 4,200,575 76,990 4.200.27 76.98 76,98 4,200,27 PROJECT: GCD100100R 300 682 PROJECT: GGE01110RM 631,729 631,430 **Difference** 

**Project Number** Reconciliation

Project GCD100100R for enriched uranium now reconciled with NMMSS.

Developed by:

300,681 element 6,967 isotope

300,682 element 6,968 isotope

**Adjusted to** 

+1

UNCLASSIFIED





### Action 5

- Central Nuclear Corporation (RIS BCD) reported their ending inventory as of September 30, 2014. Normal uranium in the form of Process Residues (Unirradiated) (composition code 729) was incorrectly reported as 997 kilograms. The correct value is 977 kilograms. The material is in project Uranium Processing (GCD10010EU).
- BCD reported an ending inventory for normal uranium in the form of samples and standards (composition code 771). This inventory reflects quantities in inventory as of September 30, 2014. BCD reported a quantity of 45 kilograms in project Rough Machining Process Startup (GGE01110RM). The correct element weight is 65 kilograms. The form of the material and the project were originally reported correctly.
- During the process month of September 2014, BCD reported transaction 930301 to record their inventory difference for the current process month. Transaction 930301 consisted of only this one line. The material is enriched uranium. An element weight of 888 grams and an isotope weight of 10 grams (1.1261%) were reported. The correct element weight should be 1188 grams and the isotope weight should be 14 grams (1.1785%). The material is in project Uranium Processing (GCD10010UE). A clerical error was made in reporting the transaction to NMMSS.
- BCD received five items of enriched uranium from Advanced Biophysics Foundry (RIS ABF) on transaction 10. The material was received in the previous fiscal year. A recent laboratory analysis determined that an additional gram of both element and isotope was received. This material is in project Uranium Recovery (GCD100100R) and is in the form of standards (composition code 771). The document in error contained only one detail line. The element weight was 300.681 grams and the isotope weight was 6,967 grams.
- Extended Nuclear Enterprise (RIS EZY) made a shipment of one item of enriched uranium to BCD on transaction 422 in a previous process period. The element weight reported was one gram and the isotope weight, was zero (0.7500%). BCD issued a corrected 741 document to reflect a change to both element and isotope weights. The element weight should be 300 grams and isotope weight should be 3 grams (1.0000%). The materiel is in project Rough Machining Process Startup (GGE01110RM) and in the form of In Other R&D Usage. The 741 provided to FZY was also incorrect.

### **Project Number** Reconciliation

Extended Nuclear Enterprise (RIS EZY) made a shipment of one item of enriched uranium to BCD on transaction 422 in a previous process period. The element weight reported was one gram and the isotope weight was zero (0.7500%). BCD issued a corrected 741 document to reflect a change to both element and isotope weights. The element weight should be 300 grams and isotope weight should be 3 grams (1.0000%). The material is in project Rough Machining Process Startup (GGE01110RM) and in the form of In Other R&D Usage. The 741 provided to EZY was also incorrect.

Identify the entry on the appropriate NMMSS report. Show the solution for correcting their entry with NMMSS. Complete a worksheet to display the results of the correcting entry.





### **Solution:**

# **Project Number Reconciliation**

DOE/NRC Form 741 adjustment reported to NMMSS with corrected quantities

DOE/NRC FOR (04-2018) Previous e MANDATORY DATA AUTHORIZED BY 10 Public Laws 83-703,	editions are obsolete COLLECTION I CFR 30, 40, 50, 70, 72 93-438, 95-91	2, 74, 75, 150, AR MATERIAL T		S. NUCLEAR REG	AND ULATOI			Es	PPROVED BY Obstimated burden per formation is require end comments regar ommission, Washingto formation and Regula 503. If a means used NRC may not cond	response to cor	nply with	concrete that about	changes in in	iontory of	nd 15 r	minute	es. Th
1. SHIPPER'S RIS	2. RECEIVER'S RIS	3. TRANSACTION NO.	4, CORRECTION NO.	5. PROC	ESSING COD	E			6. ACTION CODE			7. DOCUMENTATION (	(Only if document is cla	assified SECRET	0	_	
EZY	BCD	422	1	a. SHIPPER	b. RECEIV	ER A	a. SHI	PPER	b. RECEIVER	D PAGE	0	F PAGES COP	Y OF	COPIES	SERIES		
8.a. NAME AND ADDRESS OF SHIPPER	b. LICENSE. NO.	9.a. NAME AND ADDRESS OF RECEIVER	b. LICENSE NO.	**	10. NO OF	DATA LINE	ES 2			11. NATURE OF TR	ANSACTION	'		NO. DI	ISTRIBUT	TION OF	F COPIES
	L	*11000000000000000000000000000000000000			12.a. SHIP	PED FOR A	ACCOUNT OF	. RIS		13.a. SHIPPED TO A	ACCOUNT OF	b. RIS		1			
										-		.63		2			-
														3			
														4			
c. ATTENTION:		c. ATTENTION:												5			
d. TELEPHONE:		d. TELEPHONE:												- 6			
14. TRANSFER AUTHOR	ITY - CONTRACT, NM DRA	FT, OR ORDER NUMBER				15.EXP O	RT OR IMPORT T	RANSFERS	S: LICENSE NO.					7			
16. MATERIAL TYPE ANI	) DESCRIPTION					17.	18.		72	-		21.		8			
0.1111211121112111	J DECOM HOM					LINE NUMBER	COUNTR OBLIGAT		19. MATERIAL TYPE	20. OBLIGATE ELEMENT WE	D	OBLIGATED ISOTOPE WEIGHT For Enriched Uranium Only					
						NUMBER	OBLIGAT	IION	TYPE	ELEMENT WE	IGH I	For Enriched Uranium Only		9	MONTH	DAY	YEAR
													22. ACTIO	N DATE	(MM)	(DD)	(7777)
													a. SHIPMENT		$\vdash$		-
23a. MISCELLANEOUS			b. CONCISE NOTE AT	TACHED									b. SHIPPER'S COI	RRECTION		<u> </u>	_
			c. UK REP ORT	ABLE? YES	NO								c. RECEIPT			<u> </u>	
					_								d. RECEIVER'S MI	EASUREMENT			
													e. RECEIVER'S CO	ORRECTION	09	30	201
						24. TOTAL	L GROSS WEIGH	T		.e	2	25. TOTAL VOLUME (Waste 7	Transfers Only)		1. 1/2		A.
BACK REFERENCE	LINE TYPE NO. OF INV.	IDENTIFICATION (ITEM/BATCH NAME)		JECT MATE- MBER RIAL	COMP/ FACILITY	OWNER CODE	MEAS.	IEAS.IDEN	T. GROSS WEIGHT	NET WEIGHT	ELEM		WEIGHT % ISOTOPE	ISOTOPI WEIGHT		LIMI	OTOPE MIT OF
MUMBER NUMBER	CHANGE	d.		TYPE	CODE		POINT 1	2	3		n	ERROR	130-5000000000	0.000.000	15	ERI	ROR
DATA	b. c.	Q.	е.	f. g.	- 0,	- 15	J. BASIS	OMP	METHOD I.	m.		. 0.	p.	- u.	-		ř.
S														_			
														1			
SHIPPER'S																	
표																	
26. \$										v e							
7																	
	OLUBBEDIO DATA	SIGNATURE OF AUTHORIZED	OFFICIAL AND DATE DICK	NED.													
TTT	SHIPPER'S DATA	GIGNATURE OF AUTHORIZED	OF FICIAL AND DATE SIGI	NEO .		1	++	27s. RI	ECEIVER & DATA		SIGNA	ATURE OF AUTHORIZE	:D OFFICIAL AND	DATE SIGNE			
DATA	1		-1 GGE0111	0RM 20	746	G					-1		0.7500	0	$\mp$	_	
R'S D	2		1 GGE0111	2000	746	G					300		1.0000	3	$\dashv$		
l če					+ **					_	U		1	+	-	_	



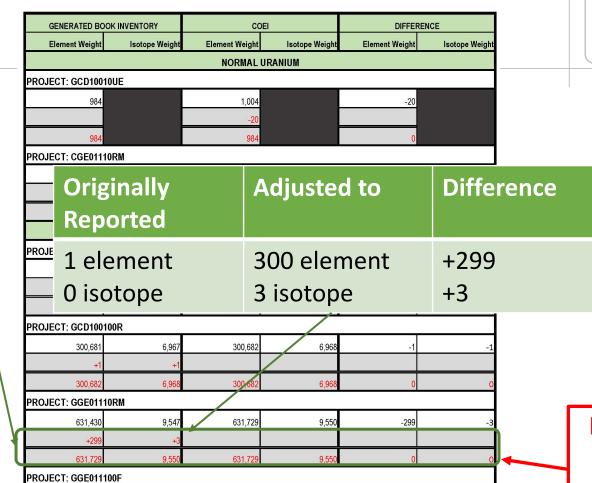




### **Solution:**

Reporting of the adjustment DOE/NRC Form 741 (Nuclear Material Transaction Report) impacted the reconciliation worksheet as follows:

### UNCLASSIFIED NMM-112 RECONCILIATION CASE STUDY WORKSHEET



UNCLASSIFIED

Project GGE01110RM for enriched uranium now reconciled with NMMSS.

**Project Number** 

Reconciliation





### Action 6

**Project Number** Reconciliation

Central Nuclear Corporation (RIS BCD) reported their ending inventory as of September 30, 2014. Normal uranium in the form of Process Residues (Unirradiated) (composition code 729)

BCD reported (during the current reporting period) a gain (from other materials – use code 22) for enriched uranium on transaction number 930331. The element weight was 477 grams and isotope weight was 270 grams (56.6038%). This gain was a result of the degradation of depleted uranium (use code 71). The depleted uranium was reported as zero kilograms element weight and zero kilograms isotope weight (0.1110%). Production personnel informed you that an error existed in their reported weights for the enriched uranium. The element weight should be 494 grams and the isotope weight should be 291 grams (58.9069%). The depleted uranium values did not change. The material is in the project Fabrication – General Account (GGE011100F) and in the form of hexafluoride product (composition code 103).

Identify the entry on the appropriate NMMSS report. Show the solution for correcting their entry with NMMSS. Complete a worksheet to display the results of the correcting entry.

NOTE: Remember that data lines with blending use codes (i.e., 22, 77, ED, EN, DE, etc.) must ALWAYS be paired.

- 6. BCD reported (during the current reporting period) a gain (from other materials use code 22) for enriched uranium on transaction number 930331. The element weight was 477 grams and isotope weight was 270 grams (56.6038%). This gain was a result of the degradation of depleted uranium (use code 71). The depleted uranium was reported as zero kilograms element weight and zero kilograms isotope weight (0.1110%). Production personnel informed you that an error existed in their reported weights for the enriched uranium. The element weight should be 494 grams and the isotope weight should be 291 grams (58.9069%). The depleted uranium values did not change. The material is in the project Fabrication – General Account (GGE011100F) and in the form of hexafluoride product (composition code 103).
- BCD issued a corrected 741 document for a receipt of three items of enriched uranium from Midway Enrichment Manufacturing (MEM) on transaction 4, correction 1. The items are in the form of samples and standards (composition code 771). You discover an error on 741 sent to NMMSS. The element weight was entered as a negative 11 grams and the isotope weight was entered as a negative 10 grams (90.9091%) on the "Was" line (back out). The correct element weight is a negative 1,111 grams and correct isotope weight is a negative 510 grams (45.9046%). The 741 provided to Midway was correct, but keystroke errors were made in sending the data to NMMSS. The material is in project Fabrication - General Account (GGE011100F).



6

### **Solution:**

**Project Number Reconciliation** 

DOE/NRC Form
741 replacement
reported to
NMMSS with
corrected
quantities

DOE/NRC FORI (04-2018) Previous e MANDATORY DATA AUTHORIZED BY 10 Public Laws 83-703, 9	ditions are obsolete COLLECTION CFR 30, 40, 50, 70, 72 33-438, 95-91	2, 74, 75, 150, AR MATERIAL T		U.S. DEPAR S. NUCLEAR RI	AND EGULATO			Estin infor Send Comi Infor 2050	nated burden pe mation is requi I comments rega mission, Washing nation and Regu 3 If a means us	DMB: NO. 3150  or response to com  red for IAEA acco  arding burden estim  cton, DC 20555-000  latory Affairs, NEOE  ed to impose an infi  duct or sponsor, ar	ply with this junting repo ate to the In 1, or by e-r 3-10202, (31: ormation col	orts that show formation Servional to infocolled 50-0003), Office lection does not	changes in invoces Branch (T-2 ts@nrc.gov, and of Management display a curren	1 hour an entory of F43), U.S. to the De and Budg	d 15 m nuclea Nuclea sk Offic et, Was MB con	r materia er Regula er, Office hington, atrol numl	Th
1. SHIPPER'S RIS	2. RECEIVER'S RIS	S 3. TRANSACTION NO.	4, CORRECTION NO.	5. P	ROCESSING CO	DE		-	6. ACTION CODE	Ĭ		7. DOCUMENTATION	(Only if document is clas	sified SECRET	)		-
BCD	BCD	930331		a. SHIPPER C	b. RE CE	IVER	a. SHII	PPER M	b. RECEIVER	PAGE	OF	PAGES COR	PY OF	COPIES	SERIES		_
8.a. NAME AND ADDRESS OF SHIPPER	b.LICENSE. NO.	9.6. NAME AND ADDRESS OF RECEIVER	b. LICENSE. NO.		100.454001.44	DF DATA LIN	ACCOUNT OF T	. RIS		11. NATURE OF TRAI 13.a. SHIPPED TO AC		b. RIS		NO. DI	STRIBUTIO	ON OF COPI	ES
c. ATTENTION:		c. ATTENTION:												3 4 5			_
a. FLEPHONE:  14. TRANSFER AUTHOR  16. MATERIAL TYPE AND	TY - CONTRACT, NM DRA	d. TELEPHONE:				15.EXPO	RT OR IMPORT TI		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			21.		6 7 8			_
15.1111211121112111	SEESTAL RISIN					LINE NUMBER	18. COUNTRY OBLIGAT		19. MATERIAL TYPE	20. OBLIGATED ELEMENT WEIG	OI SHT For	BLIGATED ISOTOPE WEIGHT Enriched Uranium Only	22. ACTION	9	MONTH (MM)	DAY YEA	AR ~^
23a. MISCELLANEOUS			b, CONCIDE NOTE A		NO								a. SHIPMENT b. SHIPPER'S COR c. RECEIPT	100,000,000	09	30 20	1
						24. TOTA	L GROSS **FIGHT	ī			25. TO	DTAL VOLUME (Waste	d. RECEIVER'S ME e. RECEIVER'S CO Transfers Only)				_
BACK REFERENCE NUMBER a.	LINE TYPE OF INV. CHANGE	IDENTIFICATION (ITEM/BATCH NAME) d.	NO. OF PRITEMS NU	UMBER F	ATE- COMP/ FACILITYPE CODE g. h.	OWNER Y CODE	KEY M MEAS. POINT 1 J. BASIS		GROSSWEIGH 3 HOD I.	NET WEIGHT	ELEMENT WEIGHT	ELEMENT LIMIT OF ERROR 0.	WEIGHT % ISOTOPE p.	ISOTOPI VVEIGHT		ISOTOPE LIMIT OF ERROR	
SHIPPER'S DATA	1 22 2 71		GGE011			G G					494 0		58.9069 0.1110	291			
26.																	_
1 1 26s. S	SHIPPER'S DATA	SIGNATURE OF AUTHORIZED	OFFICIAL AND DATE SIG	GNED	I	1	+++	27s. REC	EIVER'S DATA		SIGNATUI	RE OF AUTHORIZ	ED OFFICIAL AND I	DATE SIGNE	ED T		_

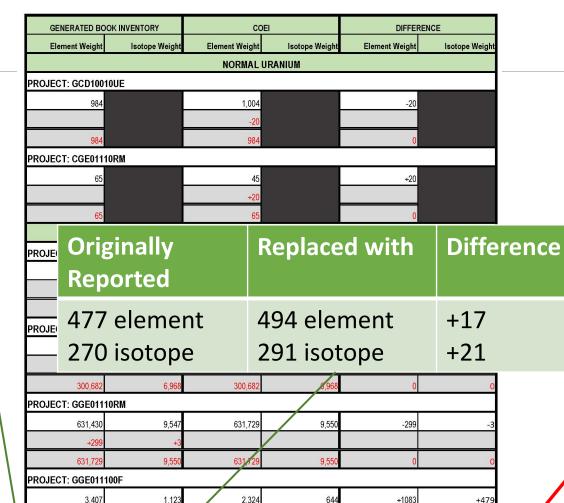




### **Solution:**

Reporting of the replacement DOE/NRC Form 741 (Nuclear Material Transaction Report) impacted the reconciliation worksheet as follows:

### UNCLASSIFIED NMM-112 RECONCILIATION CASE STUDY WORKSHEET



UNCLASSIFIED

Project Number Reconciliation

Project GGE011100F for enriched uranium is not yet reconciled with NMMSS.







### **Action 7**

- Central Nuclear Corporation (RIS BCD) reported their ending inventory as of September 30, 2014. Normal uranium in the form of Process Residues (Unirradiated) (composition code 729) was incorrectly reported as 997 kilograms. The correct value is 977 kilograms. The material is in project Uranium Processing (GCD10010EU).
- BCD reported an ending inventory for normal uranium in the form of samples and standards (composition code 771). This inventory reflects quantities in inventory as of September 30, 2014. BCD reported a quantity of 45 kilograms in project Rough Machining Process Startup (GGE01110RM). The correct element weight is 65 kilograms. The form of the material and the project were originally reported correctly.

**Project Number** Reconciliation

BCD issued a corrected 741 document for a receipt of three items of enriched uranium from Midway Enrichment Manufacturing (MEM) on transaction 4, correction 1. The items are in the form of samples and standards (composition code 771). You discover an error on 741 sent to NMMSS. The element weight was entered as a negative 11 grams and the isotope weight was entered as a negative 10 grams (90.9091%) on the "Was" line (back out). The correct element weight is a negative 1,111 grams and correct isotope weight is a negative 510 grams (45.9046%). The 741 provided to Midway was correct, but keystroke errors were made in sending the data to NMMSS. The material is in project Fabrication – General Account (GGE011100F).

Identify the entry on the appropriate NMMSS report. Show the solution for correcting their entry with NMMSS. Complete a worksheet to display the results of the correcting entry.

> isotope weight was 270 grams (56.6038%). This gain was a result of the degradation of depleted uranium (use code 71). The depleted uranium was reported as zero kilograms element weight and zero kilograms isotope weight (0.1110%). Production personnel informed you that an error existed in their reported weights for the enriched uranium. The element weight should be 494 grams and the isotope weight should be 291 grams (58.9069%). The depleted uranium values did not change. The material is in the project Fabrication – General Account (GGE011100F) and in the form of hexafluoride product (composition code 103).

BCD issued a corrected 741 document for a receipt of three items of enriched uranium from Midway Enrichment Manufacturing (MEM) on transaction 4, correction 1. The items are in the form of samples and standards (composition code 771). You discover an error on 741 sent to NMMSS. The element weight was entered as a negative 11 grams and the isotope weight was entered as a negative 10 grams (90.9091%) on the "Was" line (back out). The correct element weight is a negative 1,111 grams and correct isotope weight is a negative 510 grams (45.9046%). The 741 provided to Midway was correct, but keystroke errors were made in sending the data to NMMSS. The material is in project Fabrication - General Account (GGE011100F).

Developed by:

Populate the reconciliation worksheet based on the seven actions listed above.





### **Solution:**

# **Project Number Reconciliation**

DOE/NRC Form
741 replacement
reported to
NMMSS with
corrected
quantities

DOE/NRC FORM (04-2018) Previous e- MANDATORY DATA - AUTHORIZED BY 10 Public Laws 83-703, 9	ditions are obsolete COLLECTION CFR 30, 40, 50, 70, 72, 3-438, 95-91	74, 75, 150, R MATERIAL T		U.S. DEPAR'S. NUCLEAR RE	AND GULATO			Estii info Sen Corr Infor 2050	PROVED BY ON mated burden per r rmation is requirect d comments regardi mission, Washingtor mation and Regulate 03. If a means used NRC may not condu	esponse to com for IAEA acco ng burden estim ng DC 20555-000 ny Affairs, NEOE to impose an info	ply with this unting repo ate to the Inf 1, or by e-m 3-10202, (315 ormation coll	mandatory colle orts that show c formation Service nail to infocollects 50-0003), Office of ection does not of s not required to	ection request: hanges in investes Branch (T-2 Fa@nrc.gov, and of Management display a current respond to, the	EXPIR 1 hour and entory of entory of entory of entory of entory of entory of entory en	id 15 r nuclea Nucle sk Offi et, Wa MB coi	minute ar ma ar Rei icer, C ishingt introl n	o/202 s. Th terial: gulator office on, D numbe
1. SHIPPER'S RIS	2. RECEIVER'S RIS	3. TRANSACTION NO.	4. CORRECTION NO.	5. PR	OCESSING COL	E			6. ACTION CODE	Ĭ		7. DOCUMENTATION (C	Only if document is class	sified SECRET	)		
MEM	BCD	4	1	a. SHIPPER	b. RECEI	VER C	a. SHIF	PPER	b.RECEIVER I	PAGE	OF	PAGES COPY	OF .	COPIES	SERIES		
8.a. NAME AND ADDRESS OF SHIPPER	b. LICENSE NO.	9.a. NAME AND ADDRESS OF RECEIVER	b.LICENSE NO.		Transmission with	F DATA LINI				11. NATURE OF TRAI				NO. DI	STRIBUT	TION OF	COPIES
					12.a. SHI	PPED FOR A	ACCOUNT OF b.	.RIS		13.a. SHIPPED TO AC	COUNT OF	b. RIS		1			
														2			
														3			
														4			
c. ATTENTION:		c. ATTENTION:												5			
d. TELEPHONE:	None To opposite to the second	d. TELEPHONE:				Í.			20 P P P P P P P P P P P P P P P P P P P					6			
14. TRANSFER AUTHORI	TY - CONTRACT, NM DRAFT	T, OR ORDER NUMBER				15. EXP O	RT OR IMPORT TE	RANSFERS:	LICENSE NO.					7			
46. MATERIAL TYPE AND	DESCRIPTION					17.	18	- 1	19.	20.	i i	21.		8			
						LINE NUMBER	COUNTRY	/ OF	MATERIAL TYPE	OBLIGATED ELEMENT WEIG	OE	BLIGATED ISOTOPE WEIGHT					
						NOMBER	ODLIGATI	ION	33762	CCCMCNT VVC10	For E	Enriched Uranium Only	22. ACTION	Date	MONTH (MM)	DAY	YE AR
`						-							a. SHIPMENT	JAIE	(MM)	(DD)	(YYYY
23a, MISCELLANEOUS	$\overline{}$		etropi filosopo i pelar hasti se arropigano que i tropica consciente.														
200.111002222 112000			b. CONCISE NOTE ATT	TACHED		-							b. SHIPPER'S CORR	ECHON			
			c. UK REPORT	ABLE? YES	NO								c. RECEIPT				
						-							d. RECEIVER'S MEA				
							Augustus and the second						e. RECEIVER'S COR	:RECTION	09	30	2014
							L GROSS WEIGHT					TAL VOLUME (Waste Tr					
BACK REFERENCE NUMBER	NO. OF INV.	(IDENTIFICATION (ITEM/BATCH NAME)	NO. OF PRO	IJECT MAT MBER RIA	AL FACILITY	CODE	KEY MI MEAS. POINT	EAS.IDENT. k.	GROSS WEIGHT	NET WEIGHT	ELEMENT WEIGHT	ELEMENT LIMIT OF ERROR	WEIGHT % ISOTOPE	ISOTOPE WEIGHT	E	LIMI"	OF
<b>≰</b>	b. c.	d.		. "			J. BASIS	2 OMP ME	3 ETHOD I.	m.	n.	0.	р.	q.		ER.	
DATA		***															
တ္																	
H H																	
SHIPPER																	
26.																	
252									$ \downarrow $						$\dashv$		
▲ ▲ 26s. S	HIPPER'S DATA	SIGNATURE OF AUTHORIZED	OFFICIAL AND DATE SIGN	NED				27 s DEC	CEIVER'S DATA		SIGNATUR	RE OF AUTHORIZE	D OFFICIAL AND F	ATE SIGNE	ED.		
TTT						] 1	++	218. NEU	SEIVER S DATA						700		
Y.																	
DATA	1		-3 GGE0111	00F 20	771	G				*	-1111		45.9046	-510			
<u> </u>	1		-5 GGEUIII	00F 20	7.71	G					-1111		43.7040	-310			



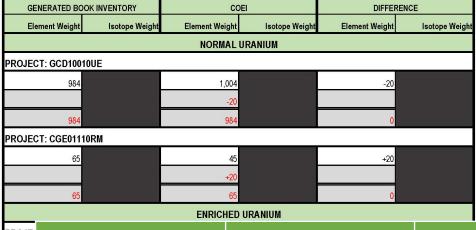




### **Solution:**

Reporting of the replacement DOE/NRC Form 741 (Nuclear Material Transaction Report) impacted the reconciliation worksheet as follows:

### UNCLASSIFIED NMM-112 RECONCILIATION CASE STUDY WORKSHEET



Project Number Reconciliation

		ENRICHED	URANIUM				
	ginally ported		Replace	d with	Diffe	rence	
	-11 element -10 isotope		-1111 e -510 iso		-110 -500		
PROJECT: GGE011	10RM						
631,430	9,547	631,729	9,550	-299	-3		Pro
+299	+3						,

Project GGE011100F for enriched uranium is reconciled with NMMSS.



PROJECT: GGE011100F

3.407

1,123





### **Solution:**

### UNCLASSIFIED NMM-112 RECONCILIATION CASE STUDY WORKSHEET

**GENERATED BOOK INVENTORY** DIFFERENCE COEI **Element Weight** Isotope Weig **Element Weigh** Isotope Weigh Isotope Weigh **NORMAL URANIUM** PROJECT: GCD10010UE 1,004 PROJECT: CGE01110RM **ENRICHED URANIUM** PROJECT: GCD10010UE 76,990 76,986 +300 4,200,575 4,200,27 4,200,27 76,98 4,200,27 PROJECT: GCD100100R 6,96 300,682 300,681 PROJECT: GGE01110RM 9,547 9,550 9,55 631,72 PROJECT: GGE011100F 3,407 1,123 2,324 +1083 +479 -1,100 2.324

**Project Number Reconciliation** 

All project numbers for Central Nuclear Corporation (RIS BCD) are reconciled with NMMSS.





### Questions



