I-GANE-34

GANE #34

Georgia Institute of Technology

NEELY NUCLEAR RESEARCH CENTER
900 ATLANTIC DRIVE
ATLANTA, GEORGIA 30332-0425

(404) 894-3800

DOCKETED
USNRC

'96 JUL 10 A10:11

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

March 1, 1988

Director, Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket No. 50-160 License No. 97

Attention: Document Control Desk

Gentlemen:

On behalf of the Georgia Institute of Technology, I hereby apply to the Nuclear Regulatory Commission to amend facility operating license No. 97 as follows:

Section 2.B(2) change from:

2.B(2) "Pursuant to the Act and 10 CFR Part 70, "Special Nuclear Material," to receive, possess, and use at any one time in connection with operation of the reactor up to 13.5 kilograms of contained uranium 235; and to receive, and possess, but not to use, up to 700 grams of U-235 at an enrichment less than 20% contained in the core and control rods of the AGN 201 reactor, Facility Operating License No. R-111, Docket No. 50-176,"

to:

2.B(2) Pursuant to the Act and 10 CFR Part 70, "Special Nuclear Material," to receive, possess and use at any one time in connection with operation of the reactor up to 13.5 kilograms of contained uranium 235.

Justification:

On December 18, 1984 we requested to transfer the AGN 201 fuel from license No. R-111 to license No. 97 so that an orderly and timely decommissioning of the AGN 201 reactor and the eventual return of the AGN fuel to its owner, the Department of Energy, would be possible. At that time the return of the fuel involved factors not under the control of either the licensee or NRC.

Since that time the AGN fuel has been shipped to ORNL. Applicable documents showing appropriate transactions are enclosed.

A020
1/1

Consequently an amendment to the GTRR Technical Specifications removing the statement, ". . . and to receive and possess, but not to use, up to 700 grams of U-235 at an enrichment less than 20% contained in the core and control rods of the AGN 201 reactor, facility operating license No. R-111 Docket No. 50-176," is appropriate.

We would appreciate NRC cooperation in this matter. Should you have any questions please let me know.

Sincerely yours,

R.A. Karam
Director

RAK:jlr

Attachments

Form DOE 284
(11-89 Previous editions are obsolete)
MANDATORY DATA COLLECTION
AUTHORIZED BY Public Laws
83-703, 93-438

APPROVED BY OMB
038 R0468

U.S. DEPARTMENT OF ENERGY

NUCLEAR MATERIAL TRANSFER RECEIPT

NUCLEAR MATERIAL ON TRANSFER	FROM (RIS)	TO (RIS)	NO.
	ZGY	FZF	6

SHIPPING DATE	DATE RECEIVED
	12-11-87

MATERIAL HAS BEEN VERIFIED AS FOLLOWS (check one):

PIECE COUNT ☐ CONTAINER COUNT ☑ GROSS WEIGHT CHECK ☐

OTHER: _____

SHIPPER'S WEIGHTS AND NUCLEAR MATERIAL CONTENTS ARE ACCEPTED PENDING FINAL VERIFICATION MEASUREMENTS AND COMPLETION OF DOE/NRC FORM 741

BY "Joan M Hudson for DB Male"
(Signature of Receiving Representative)

(See instructions for provisions regarding certification) 12/15/87

18 U.S.C. SECTION 1001 ACT OF JUNE 25 1948 62 STAT 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTERS WITHIN ITS JURISDICTION

NUCLEAR MATERIAL TRANSACTION REPORT

ZGY	EZE	6	NA				A	

R-97

. Institute of Technology
tlanta, Georgia 30332

Dr. R. A. Karam
(404) 894-3620

U.S. DOE
C/O Martin Marietta Energy Systems, Inc.
Bear Creek Road
Y-12 Plant, Bldg. 9720-8
Oak Ridge, TN 37830
Roger Yarborough
(615) 574-2583

1 | D

ZGY

Ga. Institute of Technology

ZGY - EZE
ZGY - QFE

20 (UO_2 in a solid polyethylene material)

This is the entire inventory of Ga. Tech's GN 201 reactor fuel. This DOE owned aterial (MMA) 223

149 (includes 2-55 gal drums)

24. SHIPPER'S DATA	1		See attached		-	20	29E	-	A	USUS0000							3331		19.9940	666

24. SHIPPER'S DATA T. SIGNATURE OF AUTHORIZED OFFICIAL AND DATE SIGNED
Dr. R. A. Karam 12/8/87 R. A. Karam

25. RECEIVER'S DATA T. SIGNATURE OF AUTHORIZED OFFICIAL AND DATE SIGNED
(See instructions for procedures regarding confidential info)

25. RECEIVER'S DATA

FUEL LOADING FOR THE AGN 201 REACTOR

SERIAL NO. 104

Item	Element No.	Total Wt. (gm)*	U-235 Wt. (gm)		Total Uranium (gm) (DRUM)	(piece)
(DRUM) ①	20459	2027.5	93.25		465.717	
	20461	1262.0	57.89		289.891	
	20462	1264.0	58.14	①	290.341	5
	20463	1264.5	57.99		290.456	
10" Core Discs	20464	650.5	29.91		149.820	
	20465	660.5	30.38		151.769	
②	20466	2139.0	98.09	②	491.328	4
	20467	2143.5	98.29		492.362	
	20471	2059.5	94.40		473.067	
Fuse ①	20109	5.97	0.40	①	{ 1.371 }	1
Safety Rods ①	20373	78.83	3.62		18.101	
	20374	79.00	3.63		18.146	
	20375	78.80	3.62		18.100	
	20376	78.96	3.63		18.137	
	20379	78.96	3.63	29.03 ①	18.137	2
	20382	78.87	3.63		18.116	
	20383	78.88	3.63		18.119	
	20384	79.04	3.64		18.156	
Coarse Control Rod ②	20377	78.83	3.63		18.107	
	20378	78.86	3.63		18.114	
	20380	79.05	3.64 (14.51)		18.158	
	20381	78.96	3.63	18.16 ②	18.137	2
Fine Control Rod	20219	19.71	0.90		4.527	
	20220	19.76	0.91		4.539	
	20221	19.81	0.91 (3.63)		4.550	
	20222	19.84	0.91		4.557	
Total			665.93 gm		3330.818 gm	

*: This includes the weight of the Total Uranium + the polyethylene

CLASSIFICATION

CLASSIFICATION

IN MARIETTA ENERGY SYSTEMS, INC.
2 PLANT P.O. BOX Y
K RIDGE, TENNESSEE 37830

DATE Nov. 6, 1987

OWINGS, NM REPRESENTATIVE
O. 9723-10, MS-1

AUTHORIZATION NO.
MAA-

AUTHORIZATION IS REQUESTED TO SHIP THE NON-SCHEDULED, NON-ROUTINE SPECIAL NUCLEAR MATERIALS

PPER PPER FACILITY	Georgia Institute of Technology Noely Nuclear Research Center	RIS ZGY	
DRESS	900 Atlantic Drive Atlanta, Georgia 30332	741 NO. 6	
UESTED SHIP DATE	December 1, 1987		
ATURE OF AUTHORIZED REPRESENTATIVE	Dr. Fatih B. Karam	DATE 11/6/87	PHONE (404) 894-3620

IVING APPROVAL (TO BE COMPLETED BY Y-12)

ED FOR NMSSS WAREHOUSE

TURE OF AUTHORIZED NM REPRESENTATIVE	DATE	PHONE

GENERAL INFORMATION

SON SLE PERSON DESIGNATED AS RECIPIENT OF MATERIAL
Mr. Hirborough or Diana Nate (Y-12 Plant)

PURCHASE ORDER NO.

WHAT IS THE REASON FOR THE MATERIAL BEING SHIPPED INTO THE Y-12 PLANT—RECOVERY, RETIREMENT OR EVALUATION, ETC.?
[illegible] (GNW-[illegible] Reactor Fuel)

ATERIAL WAS SHIPPED TO YOU FROM THIS FACILITY, REFERENCE THE DOE/NRC FORM 741 NUMBER.

GENERAL MATERIAL DESCRIPTION

RIAL (CHEMICAL ELEMENT) Uranium	GROSS QUANTITY Total U = 3330.82 gm U-235 665.93 gm

AL DESCRIPTION
[illegible] Reactor Fuel (UO_2 in a solid polyethylene)

AL DESCRIPTION
[illegible] in polyethylene (See Attached)

IPAL IMPURITIES

AND QUANTITY OF PRECIOUS METALS (IF ANY)

CLASSIFICATION

CLASSIFICATION

CLASSIFICATION

MATERIAL HISTORY

ARE THERE ANY KNOWN HAZARDS CONNECTED WITH THE HANDLING OF THE MATERIAL? (YES OR NO) IF YES, DESCRIBE IN DETAIL ON A SEPARATE SHEET. *Radioactive (Use Normal Procedu*

HAS THE MATERIAL BEEN EXPOSED TO ANY RADIONUCLIDES, SUCH AS FISSION PRODUCTS OTHER ACTINIDES, TRITIUM, ETC.? (YES OR NO) IF YES, DESCRIBE IN DETAIL ON A SEPARATE SHEET THE CONDITIONS IN WHICH THE MATERIAL WAS EXPOSED. INCLUDE CONCENTRATIONS OF CONTAMINANTS AND METHODS OF ANALYSIS. *NO*

HAS THE MATERIAL COME IN CONTACT WITH ANY HAZARDOUS MATERIAL OR UNDERGONE UNUSUAL PROCESSING OR TESTS? (YES OR NO) IF YES, DESCRIBE IN DETAIL ON A SEPARATE SHEET THE HAZARDOUS MATERIAL, PROCESSING OR TESTS, DETAIL RADIATION OR CONTAMINANT LEVELS. *NO*

WHAT IS THE FORM OF THE MATERIAL *Uranium mixed with polyethylene (See Attached)*

NAME AND PHONE NUMBER OF SHIPPER'S CONTACT REGARDING CONTAMINANT OR RADIATION LEVELS.

Dr. Fatih A. Karam (404) 894-3620

NOTE: ATTACH DETAIL INFORMATION DESCRIBING INDIVIDUAL ITEMS INCLUDING NET WEIGHT, SNM VALUE, % ENRICHMENT, ISOTOPIC VALUE AND MATERIAL COMPOSITION *(See Attached)*

METHOD OF PACKING

INSIDE CONTAINER TYPE	APPROX. NO.
55 gal drum (7 A container)	*2*
MIDDLE CONTAINER TYPE	**APPROX. NO.**
5 gal poly bucket	*2 (one in each drum)*

OTHER CONTAINER INFORMATION

SPECIAL PRECAUTIONS TO BE OBSERVED WHEN OPENING THE CONTAINER(S)

Other than 5 gal buckets cannot be easily opened without destroying lid

NOTE:

1. ALL INSIDE CONTAINERS OR PACKAGES MUST HAVE CONTAINER ID, GROSS AND TARE WEIGHTS AS A MINIMUM. *Two 55 gal. drums will be labeled 1 and 2*

2. NOTIFICATION OF SHIPMENT AND DOE/NRC-FORM 741 MUST INCLUDE THE Y-12 AUTHORIZATION NUMBER. *Will do as instructed*

3. BACK-UP INFORMATION AND/OR DOE/NRC-FORM 741 MUST PRECEDE OR ACCOMPANY SHIPMENT. *Form 741 will be attached to outside of one of the drums*

CLASSIFICATION

DISTRIBUTION:
MSS SUPERVISOR
RECIPIENT OF MATERIAL

CLASSIFICATION

[illegible] (9)
[illegible]

Georgia Institute of Technology

NEELY NUCLEAR RESEARCH CENTER
900 ATLANTIC DRIVE
ATLANTA, GEORGIA 30332-0425

(404) 894-3800

October 20, 1987

TO WHOM IT MAY CONCERN

NOTE:

The Nuclear Regulatory Commission has granted Georgia Institute of Technology permission to transfer all of previously R-111 (AGN-201 Reactor) licensed material to our R-97 license for storage until final transfer from ZGY is made to another licensee. A DOE/NRC 741 form will be filed at the time of transfer to another RIS.

MANDATORY DATA COLLECTION
AUTHORIZED BY 10 CFR 30, 40, 50, 70, 75, 150, Public Laws 83-703, 93-438, 95-91

U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION

NUCLEAR MATERIAL TRANSACTION REPORT

ZGY	ZGY	87/09/14					M	

R-97

GA Inst. of Technology
Atlanta, Georgia 30332

Dr. R.A. Karam
(404) 894-3620

R-97

GA Inst. of Technology
Atlanta, Georgia 30332

Dr. R.A. Karam
(404) 894-3620

1

ZGY

Same

20

This is an inventory deficiency deleted during physical inventory, resulting from the apparent loss of a discrete item.

24. SHIPPER'S DATA	01	MF	----		----	20	--	-	A	USUS0000						168. ~~168.22~~	Kar	29. ~~30.09~~	Kar
																		Per A.D.	

24. SHIPPER'S DATA — SIGNATURE OF AUTHORIZED OFFICIAL AND DATE SIGNED
Dr. R.A. Karam 09/14/87

25. RECEIVER'S DATA — SIGNATURE OF AUTHORIZED OFFICIAL AND DATE SIGNED
(See instructions for provisions regarding confidentiality)

25. RECEIVER'S DATA

18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION

DOE/NRC Form 742C
(7-80)
MANDATORY DATA COLLECTION
AUTHORIZED BY 10 CFR 10, 40, 50, 70, 75, 150, Public Laws 83-703, 93-438, 95-91

U.S. DEPARTMENT OF ENERGY
AND
U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB R0480
APPROVED BY OMB 180225 (R06-80)
Expires 6-30-83

PHYSICAL INVENTORY LISTING

1. NAME
Office of Radiation Safety
STREET ADDRESS
Georgia Institute of Technology
CITY: Atlanta, STATE: Georgia ZIP CODE: 30332

2. DOE/NRC FORM 740M ATTACHED
☐ YES ☒ NO

3. INVENTORY DATE

4. REPORTING IDENTIFICATION SYMBOL (RIS)
ZGY

5. LICENSE NUMBER(S)
R-97

6. BATCH DATA

a. MATERIAL TYPE	b. COMPTAC CODE	c. ELEMENT WEIGHT	d. ISOTOPE WEIGHT	e. DOE PROJECT NO	f.	g.	h.	i.	j. BATCH NAME	k.	l.	m. MEASUREMENT I.D.		
E-2	860	3330	666											
7. TOTALS		3330	666											

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

8. SIGNATURE (See instructions for provisions regarding confidentiality.)
Richard Fuller
Robert M. Boyd

9. TITLE
Vice President Business & Finance
Manager, Office of Radiation Safety

10. DATE
10/20/87

18 U.S.C. SECTION 1001, ACT OF JUNE 25, 1948, 62 STAT. 749; MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTERS WITHIN ITS JURISDICTION.

NAME AND ADDRESS

Georgia Institute of Technology
Atlanta, Georgia 30332
ATTN: R.M. Boyd, Manager, Office of Radiation Safety

R-97

4. REPORT PERIOD: FROM 04/01/87 TO 09/30/87

5. MATERIAL TYPE (Submit separate reports for each type): Eu2

MATERIAL ACCOUNTABILITY

SECTION A	A. ELEMENT WEIGHT	B. ISOTOPE WEIGHT
1. DOE/NRC FORM ATTACHED ☐ YES ☐ NO		
2. BEGINNING INVENTORY – DOE OWNED	3498	695
3. BEGINNING INVENTORY – NOT DOE OWNED	0	0
RECEIPTS		
4. PROCUREMENT FROM DOE — RIS	0	0
FROM		
5. PROCUREMENT – FOR THE ACCOUNT OF DOE		
6. DOD RETURNS – USE A		
7. DOD RETURNS – USE B		
8. DOD RETURNS – OTHER USES		
9. PRODUCTION		
10. FROM OTHER MATERIALS — a. ICT	0	0
b. ICT	0	0
c. ICT		
11. RECEIPTS REPORTED TO DOE/NRC ON DOE/NRC FORM 741 (Non-signed shipments)	0	0
RIS		
FROM		
DONATED MATERIAL – FROM DOE TO OTHERS		
DONATED MATERIAL – FROM OTHERS TO DOE	0	0
14. TOTAL (Lines 2 thru 13)	3498	695
REMOVALS		
15. EXPENDED IN SPACE PROGRAMS		
16. SALES TO DOE — RIS	0	0
TO		
17. SALES TO OTHERS FOR THE ACCOUNT OF DOE — RIS		
TO		
18. DOD – USE A		
19. DOD – USE B		
20. DOD – OTHER USES		
21. EXPENDED IN DOE TESTS		
22. ROUTINE TESTS		
23. SHIPPER – RECEIVER DIFFERENCES		
24. SHIPMENTS REPORTED TO NRC/DOE ON DOE/NRC FORM 741 (Non-signed shipments)	0	0
RIS		
TO		
25. DONATED MATERIAL – TO DOE BY OTHERS	0	0
26. DONATED MATERIAL – TO OTHERS BY DOE	0	0
27. DEGRADATION TO OTHER MATERIALS — a. ICT	0	0
b. ICT		
28. DECAY		
29. FISSION AND TRANSMUTATION	0	0
30. NORMAL OPERATIONAL LOSSES/MEASURED DISCARDS	0	0
31. ACCIDENTAL LOSSES	0	0
32. APPROVED WRITE-OFFS		
33. INVENTORY DIFFERENCE	168	29
34. ENDING INVENTORY – DOE OWNED	3330	666
35. ENDING INVENTORY – NOT DOE OWNED	0	0
36. TOTAL (Lines 31 thru 35)	3330	666

COUNTRY CONTROL NUMBER DATA

SECTION B	1. KY CONTROL NUMBER	2. ELEMENT WEIGHT	3. ISOTOPE WEIGHT
US US		3330	666
	4. TOTAL WEIGHT (These must agree with total on line 36)	3330	666

CERTIFICATION

SECTION C

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

SIGNATURE (See instructions for preparing on back): Richard Fuller

Duly / TITLE: Vice President Business & Finance

DATE: 10/20/87

WARNING: SECTION 1001, ACT OF JUNE 25, 1948 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY AGENCY OF THE UNITED STATES AS TO ANY MATTERS WITHIN ITS JURISDICTION