

DOCKET NO. 70-58

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MARTIN MARIETTA CORPORATION

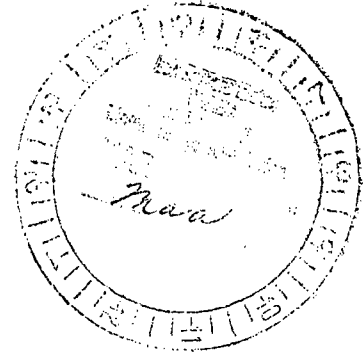
AEROSPACE CHEMICALS CONSTRUCTION MATERIALS

NUCLEAR
DIVISION
Baltimore 3,
Maryland

March 22, 1962

Refer to: LSN-15
Mail No: X839

Director
Division of Licensing & Regulations
U. S. Atomic Energy Commission
Washington 25, D. C.



Attention: Mr. Donald A. Nussbaumer, Chief
Nuclear Material Licensing Branch

Subject: Special Nuclear Material License SNM-53, Amendment

Gentlemen:

On July 20, 1961 and August 31, 1961 we submitted an amendment to add the process, description and SS material flow chart for fabrication of a uranium fuel form not previously described. This submission was in the form of a report, number MND-2603 and was approved by the AEC September 13, 1961.

We wish to further amend this process by revising a portion of MND-2603. The revision is described in the attached License Report MND-2603C, dated March 21, 1962.

I certify that the statements made in this letter are true, complete and correct, to the best of my knowledge and belief, and are made in good faith.

Very truly yours,

F. G. Myers
Assistant General Manager
Administration

RLM/FGM/plm

Enclosure

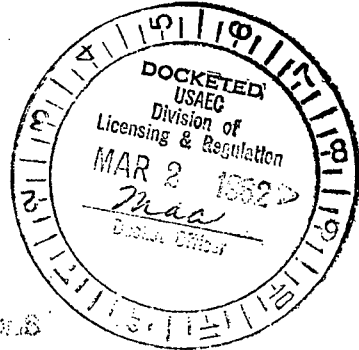
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LICENSE REPORT MWD-24030
 NUCLEAR & HEALTH SAFETY CONDITIONS
 FOR FABRICATION OF
 SPHERICAL URANIUM DIOXIDE POWDER

MARCH 21, 1962

PROCESS CONTROL FOR AREA NINE

1. All water and air filters are dried 24 hours at 120°F prior to installation. Filters are weighed, identified and weights recorded.
2. For spheroidization a lot will consist of 100 grams. Three (3) lots or 300 grams will comprise one batch.
3. At the start of each run a data sheet is attached to the load tray. (See attached Figure I) A run commences after new water and air filters are installed, the system has been flushed and an initial fuel accounting is made.
4. After a 300 gram batch is spheroidized in 100 gram lots the product is removed from the collector. Each lot is entered on the data sheet.
5. A balance is made whereby the total material received from the collection unit is weighed and deducted from the feed input. The difference is assigned to "In System". (See Form No. NA-3)
6. Steps 4 and 5 are repeated until the assigned "In System" accumulation plus 300 grams of UO_2 is greater than 370 grams of UO_2 .
7. The batch size will then be reduced to two (or one) 100 gram lots such that the assigned "In System" accumulation plus the new batch is less than 370 grams of UO_2 .
8. Step 7 is repeated until the "In System" accumulation of UO_2 plus 100 grams of UO_2 is greater than 370 grams of UO_2 . Then the water and air filters are removed from the system, dried and weighed.
9. The entire system is washed down and the UO_2 collected is dried and weighed.
10. A total fuel balance is made.
11. After drying air filters are stored. If UO_2 in the air filters is less than 200 grams UO_2 per three filter group they may be reused for later runs.
12. When an individual air filter reaches 100 grams it is dried, weighed, and stored for reprocessing.
13. Water filters are dried, weighed, and stored for reprocessing.
14. An overall run summary 20% yield is shown on the data sheet in Figure III.

Page 14 redacted for the following reason:

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MBA RECORD - SPHEROIDIZING DATA SHEET

All Weights in Grams UO₂

Lot #	INPUT			COLLECTED		IN SYSTEM		RECOVERY			REMARKS	
	Quantity	Oper. Init.	Accum.	Current	Accum.	Current	Accum.	Water Filter #	Quantity	Air Filter #		Quantity
1	100	RM	100	X								
2	100	RM	200	X								
3	100	RM	300	240	240	60	60					
4	100	RM	400	X								
5	100	RM	500	X								
6	100	RM	600	240	480	60	120					
7	100	JL	700	X								
8	100	JL	800	160	640	40	160					
9	100	JL	900	X				W-1	20			
10	100	JL	1000	160	800	40	200	W-2	22			
11	100	JL	1100	80	880	20	220	W-3	27			
12	100	JL	1200	80	960	20	240	W-4	24	A-1	35	
13	100	JL	1300	80	1040	20	260	W-5	17	A-2	68	
14	100	JL	1400	80	1120	20	280	W-6	20	A-3	37	
FUEL BALANCE								TOTALS →	130		140	

Accumulated Input
 Accumulated Collected 1120
 Amount in Water Filters 130
 Amount in Air Filters 140
 Total Accounted For 1390
 Amount In System - MUF 10
 System Clean Out - Recovery 5
 Revised MUF 5

Figure III