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CA

MEMORANDUM

TO: FILE

DATE 11/3/87

FROM: Andrew Wallo III

SUBJECT: Elimination of International Register

SITE NAME: International Register ALTERNATE NAME:

CITY: Chicago IL STATE: IL

OWNER(S)

Past: International Register Current: Owner contacted  yes  no; if yes, date contacted

TYPE OF OPERATION

- Research & Development  Facility Type
 Production scale testing  Manufacturing
 Pilot Scale  University
 Bench Scale Process  Research Organization
 Theoretical Studies  Government Sponsored Facility
 Sample & Analysis  Other
 Experimental
 Production
 Disposal/Storage

TYPE OF CONTRACT

- Prime  Other information (i.e., cost + fixed fee, unit price, time & material, etc)
 Subcontractor
 Purchase Order

Contract/Purchase Order #

CONTRACTING PERIOD: Early 1940's (met lab personnel used site equipment)

OWNERSHIP:

Table with 7 columns: AEC/MED OWNED, AEC/MED LEASED, GOVT OWNED, GOVT LEASED, CONTRACTOR OWNED, CONTRACTOR LEASED. Rows include LANDS, BUILDINGS, EQUIPMENT, ORE OR RAW MATL, FINAL PRODUCT, WASTE & RESIDUE.

MED/METABURGICAL LABORATORY PERSONNEL used equipment at site for centerless Grinding Experiments on a few pieces of uranium rod. International Register

AEC/MED INVOLVEMENT AT SITE

Control

- AEC/MED managed operations (MET LAB)
  - AEC/MED responsible for accountability (MET LAB)
  - AEC/MED overviewed operations
  - Contractor had total control
  - unknown
- Health Physics Protection
- Little or None QW III
  - AEC/MED responsibility MET LAB
  - Contractor responsibility

MATERIALS HANDLED:

Type (on basis of records reviewed)

- No Radioactive
  - Natural Radioactive from Feed Materials Production
    - Ore
    - Refined Source Material
    - Residue
  - Natural Radioactive Material from Non-Nuclear Activities
  - Man-Made
  - Other
- Comment Uranium Metal (A few rods) for MET LAB

Quantities (on the basis of records reviewed)

- None
  - Production Quantities
  - Small Amounts
- Comment Experiments were done on a few normal Uranium rods brought in by MET LAB PERSONNEL

OTHER PERTINENT FACTS:

- Facility was Licensed
    - During AEC/MED-Related Operations
    - For Similar Activities
    - For Other Activities
- Comment \_\_\_\_\_

Commercial Production Involving Radioactive Material during AEC/MED Operations

Facility was Decontaminated and Released

Availability of Close Out Records

None       Some       Sufficient

Radioactive Status:

	YES	MAYBE	PROBABLY NOT	NOT
Contaminated Potential for Exposure (accessible)	---	---	---	X
	---	---	---	X

QUANTITY OF RECORDS AVAILABLE:

- Very Little                       Some                       Sufficient

PROBABILITY OF FINDING ADDITIONAL RECORDS:

- Low                       Possible                       High

RECOMMENDATIONS:

- Eliminate  
 Consider for Remedial Action  
 Collect More Data

Comment It is clear from these few records that very little uranium was used at International Registers and it was controlled by METLAB. The lack of additional records suggest no production work was ever done at the site

REFERENCES:

Attached

SUMMARY

Records indicate International Registers were only used by MED/METLAB in the early 1940's to conduct experiments in breeding (centaless) uranium Rod. METLAB MAINTAINED CONTROL of the uranium. Based on these records and the METLAB operating practices described in the MED history, there is no potential for exposure in excess of guidelines at International Registers as a result of these operations

INTERNATIONAL REGISTER *Chicago ILL*

DATE	FILE#	FROM	TO	SUBJECT	SITES	BOX #
✓ 07/28/43	3.1CHO	CREUTZ, E.	COOPER, C.	SUMMARY ON THE USE OF CENTERLESS GRINDING EQUIPMENT ON URANIUM	SUMMERILL TUBING CO., WYCOFF DRAWN STEEL CO., ZEPHYR LAUNDRY MACHINE CO., INTERNATIONAL REGISTER CO.	MLRF 1969
04/23/43	3.1CHO	CHIPMAN, J.	DDAN, R.	LIST OF COMMERCIAL FIRMS DEALING WITH MET LABS	WOLVERINE, W.R. PRATT, JOSLYN, MIDWEST MANU. CO., GLOBE STEEL, ALCOA, B&T METALS, SUMMERILL, INTERNATIONAL REGISTER, WYCOFF, DOW	7X 3763
✓ 07/28/43	3.1CHO	CREUTZ, E.	COOPER, C.	CENTERLESS GRINDING	SUMMERILL TUBING, WYCOFF DRAWN STEEL, ZEPHYR LAUNDRY MACHINE, INTERNATIONAL REGISTER, GLOBE STEEL TUBES	34X 3775

Metallurgical Laboratory

3.1 CHO

This document consists of 2 pages and 0 figures.

No. 3 of 5 copies, Ser. A

July 28, 1945

DCV#55161

Copy

C. M. Cooper

E. Creutz



For your information, I am summarizing our experience in the use of centerless grinding equipment on uranium. I also recommend the purchase of a Cincinnati centerless grinder for the Site B shop.

Our first experience with centerless grinding was obtained at the Sumnerill Tubing Company on January 4, 1945 when an extruded tube 2 1/2 feet long and 1 5/16" in diameter was ground with an accuracy of about .0035" over the entire surface. Although I did not see this actual operation, I understand that great pains were taken. I do not know how long the grinding took.

On January 25, two tubes and one rod, each about 4 feet long, were taken to the Wycoff Drawn Steel Company where they were surfaced with an accuracy of about .001". About an hour was required to adjust the machine properly so that it would handle this material, and about an hour to clean up the surfaces. The wheel used was somewhat too soft and had to be dressed frequently. Our impression after this test was that this method was a satisfactory one for obtaining good accuracy on uranium but was rather slow and would be expensive because of wheel wear. Harder wheels tended to fill and for this reason did not seem to offer much advantage. It was realized that it would be very desirable to make tests with a number of different types of wheels to try to determine the most satisfactory. On February 26, a visit was made to the Zephyr Laundry Machine Company which had recently started manufacturing centerless grinders. The manager offered us the opportunity to make tests with different types of wheels at some time in the future.

No record of work found

On February 29, some 1" diameter pieces 6" long were ground at the International Register Company again with an accuracy of about .001". The same impression was gained here that time spent on determining the most suitable type of wheel would be well worthwhile. The machine design people suggested cylindrical grinding of these short pieces as a more practical method if they were out of round although a roughing out in a turret lathe and finishing in a centerless grinder also seemed practical.

On March 5, a 6 foot rod was straightened on an Abranson straightener and ground over its entire length with an accuracy of about .002" at Globe Steel Tubes. The wheel used here did not require



CLASSIFICATION CHANGED TO: NOT CLASSIFIED  
E. N. Pettitt 9-7-65  
Authority of: USAEC  
9-7-65 A. Cabell

REPRODUCED AT THE NATIONAL ARCHIVES

# Metallurgical Laboratory

C. M. Cooper

-2-

July 28, 1943

frequent dressing nor did it fill up. Although it was somewhat coarse, it seemed to give the best results of any we had tried. It was a carborundum wheel number 36ME. On May 18, some short pieces of rod 2 cm in diameter were ground at Globe preliminary to cladding with steel. On May 25, some 3 foot tubes were accurately ground at Globe to be clad with aluminum. For successful cladding, experience has shown that the tube should not taper or be out of round more than about .002".

On June 22, a 6 foot tube was ground and this longer length, requiring great care in handling, was successfully clad with aluminum.

In general, we have learned that centerless grinding can be very effective in producing high accuracy on short or long pieces of uranium providing the stock is not too far out of round, does not have excessive taper from end to end, and a wheel of the right composition is used. Also some time must be taken to set the machine properly. In cases where bad results have been obtained, one of these factors has apparently been at fault.

When a large number of accurate pieces of the same size are required, a good method seems to be to take a rough out, for instance, on a turret lathe, and then finish on a centerless grinder. For short experimental rods and tubes of the sort finished recently for Abbott's experiments, the centerless grinder has been very useful. For accurate production of tubes or rods of lengths longer than a few feet, such as will probably be used in P-9 exponential and later piles, there seems to be no other available method than centerless grinding since a cylindrical grinder is not well suited for such work on pieces longer than about 3 feet. Therefore, to make use of the equipment for regular experimental parts, as well as to investigate thoroughly its applicability to long pieces and to special items such as thin walled tubing, I believe we should purchase a grinder that could be installed in the Site B shop.

EC

E. Creutz

EC/o

cc Chipman  
Smyth  
Reading File

[REDACTED]

Metallurgical Laboratory

April 28, 1943

TO: John Chipman

FROM: R. L. Dean

SUBJECT: Experimental Work at Outside Companies

This is with reference to your memorandum of April 23, 1943, giving a list of 11 companies at which various members of the Metallurgical group have been conducting experimental work from time to time involving tube alloy metal.

Major Peterson has outlined a definite procedure to be followed in all cases where it is desired to conduct experimental or other work at locations outside the confines of the Metallurgical Laboratory, in order that the security angle may be adequately taken care of, and has requested that the prior approval of his office be obtained before any work of this kind is actually undertaken. The necessary forms for transmitting requests for approval of work to be done in outside plants are now available, and I have discussed them with you.

It is, of course, too late to obtain prior approval on such work as has already been done at the companies indicated in your list. However, as regards future work, I would like to request that one of the two following alternative be adopted by your group:

1. Suspend all activities at the companies listed in your memorandum until you can prepare the forms requested by the Area Engineer and secure his approval on each company.
2. If the nature of the work in hand at any of the companies indicated is too urgent to be held up pending obtaining the approval of the Area Engineer in the manner indicated above, it would be desirable to write a memorandum for Mr. Compton's signature to Major Peterson stating the special circumstances and requesting interim approval while the necessary request forms are being prosecuted.

TO: NOT CLASSIFIED

1-30-69 E N Pettit  
Authority of: USAEC  
JAN 30 1969 J Hall

MUC # 10-17

This document consists of  
1 pages and 2 figures.  
No. 6 of 7 copies, Ser. A

April 23, 1943

Vancouver, B.C. 3652

R. L. Dean

John Chipman

Document contains information affecting the national  
defense of the United States within the meaning of the  
Espionage Laws, the transmission or communication of the  
or the revelation of its contents in any manner to an  
unauthorized person is prohibited by law.

The following is a list of commercial firms with whom Mr. Cretts and I have had dealings. Also I am listing the names of the personnel with whom we have had contacts and the type of work which has been done. The names of the personnel for whom clearance has been requested are marked with an asterisk. We would welcome further discussion as to the advisability of requesting clearance on the others.

<u>Company</u>	<u>Personnel</u>	<u>Work being done</u>
Wolverine Tube Co. Detroit, Michigan	Otto Klopsch, Gen. Manager J. Rodgers*, Chief Met. J. Schummar*, Asst. Met.	Cold drawing and extrusion of tuballoy and aluminum. Jacketing
Wm. E. Pratt Co. Joliet, Illinois	Frank E. Clark, Pres. A. J. Blaesser*, Vice Pres.	Machining metal slugs
Joslyn Mfg. Co. Chicago and Fort Wayne	A. J. Blaesser*, Vice Pres. E. Yankers*, Metallurgist L. Fry*, Gen. Mgr. Fort Wayne	Hot rolling and cold straightening of tuballoy
Midwest Mfg. Co. Galesburg, Illinois	B. S. Battles, Manager	Methods for Al jacketing
Globe Steel Tubes Milwaukee, Wisconsin	H. M. Ihrig, Dir. of Res. Hofman, Metallurgist	Cold drawing and cold straightening
Aluminum Co. of Amer. New Kensington, Pa.	F. G. Frary* B. J. Fletcher* John R. Willard*	Aluminum tubing, corrosion, and jacketing of tuballoy
B and T Metals Co. Columbus, Ohio	Mr. Bonnelle Marvin Smith*	Extrusion of tuballoy and of aluminum
✓ Summerill Tubing Co. Bridgeport, Pa.	Jack Dods	Cold drawing of tuballoy Aluminum sheathing
International Register Chicago	Mr. Bauerline Mr. Gallagher	Centerless grinding of tuballoy
✓ Wycoff Drawn Steel Co. Chicago	Mr. Johnson, Mgr. Pat Newburn, Shop Foreman	Centerless grinding
Dow Chemical Co. Midland, Michigan	Wm. Loose, Metallurgist	Welding tuballoy

John Chipman

JC/e

cc C. H. Cooper. Reading File