

COPY

COMPLIANCE INSPECTION REPORT

1. Name and address of licensee Research Chemicals Inc. 170 West Providencia Street Burbank, California	2. Date of inspection October 16, 1959
	3. Type of inspection Initial
	4. 10 CFR Part(s) applicable 20 and 40

5. License number(s), issue and expiration dates, scope and conditions (including amendments)

License No.	Date	Expiration	Scope and Conditions
C-4013	3-11-58	3-31-59	Scope: 5,000 pounds of thorium-source material in the form of residues for processing.  Conditions: Required to maintain records of inventories, receipts and transfers of refined source material. Rules and regulations pertaining to Part 20.

6. Inspection findings (and items of noncompliance)

The licensee is in the business of research and processing of rare earth materials. The source material was purchased for the contained rare earths. Most of the licensed material is stored because the yield of rare earths was not as large as expected. The thorium contained in the material processed is collected as residue and stored. The only item of noncompliance observed or noted during the course of the inspection is as set out below:

10 CFR 20.203 - Caution signs, labels and signals

- (a)(1) The symbols on the containers were not magenta or purple on a yellow background. See paragraph 15 of report for details.

9701220220 970110  
PDR FDIA  
SIEFERT 96-448 PDR

7. Date of last previous inspection None	8. Is "Company Confidential" information contained in this report? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (Specify page(s) and paragraph(s))
---	--

DISTRIBUTION:

Original of report - Division of Inspection,  
Headquarters  
One copy of report - Division of Licensing and  
Regulation, Headquarters  
One copy - Inspection Division, SAN

Approved by:

Raymond F. Fish, Jr. ORIGINAL SIGNED BY  
Gene A. Blanc (Inspector) ORIGINAL SIGNED BY  
G. A. BLANC  
San Francisco  
(Operations office)

OCT 26 1959

(Date report prepared)

If additional space is required for any numbered item above, the continuation may be extended to the reverse of this form using foot to head format, leaving sufficient margin at top for binding, identifying each item by number and noting "Continued" on the face of form under appropriate item.

COPY

RECOMMENDATIONS SHOULD BE SET FORTH IN A SEPARATE COVERING MEMORANDUM

SECTION I  
GENERAL INFORMATION AND ORGANIZATION

9. This unannounced inspection was conducted by Raymond F. Fish, Jr., of the SAN Inspection Division. Dr. E. V. Kleber, head of the Research Chemicals, Inc., Division of Nuclear Corporation of America, Inc., was present during the inspection. No State representative was present during the inspection. This was the initial inspection of the subject licensee.
10. The licensee's interest is in the field of research and processing of rare earths. The source material covered by the license was purchased for the rare earths it contained and the thorium present is considered a residue. Dr. Kleber stated that this residue would be collected and stored until such time as the amount is sufficient to sell to a chemical firm. Presently the division has about 35 employees of which four are production workers and under the direct supervision of Dr. Kleber.
11. The licensee purchased 4,660 pounds of source material from G.S.A. Some of this material (400 - 500 pounds) has been processed and the thorium collected as residue and stored in two bottles.

SECTION II  
FACILITIES AND EQUIPMENT

12. This division is located in the same building as the Isotopes Specialties Company. The front office area is common to both divisions; however, the back part of the building is completely divided. Research Chemicals' section contains a hall down the middle with laboratories on either side. At the back part of the building is one large room, occupying the full width of the section, used for the processing work. The backdoor opens into a fenced yard. Storage shelves line the hallway. The two bottles containing the thorium residue are stored on these shelves. Most of the source material, approximately 4300 pounds, remains in the shipping containers (20 barrels) which are located in the fenced area in back of the building.
13. Personnel processing the source material are informed that it contains thorium. Each of the production workers is provided with a film badge from Isotopes Specialties. The film is developed once every month. Research Chemicals has no radiation survey instruments of their own, but they do have access to Isotope Specialties' instruments if necessary.
14. Dr. Kleber stated that a radiation survey was made around the area in which the shipping containers are stored. The radiation level was about 0.1 mr/hr.

SECTION III  
SIGNS AND RECORDS

15. Each of the remaining 20 shipping containers had a label bearing the proper radiation symbol and the words "Caution Radioactive Material." In addition the barrels had an IGC label containing the amount of material and the number of radiation units at one meter. The radiation symbol and the accompanying words on the label had faded, however, so that the original colors could not be determined. At the time of the inspection the symbol appeared to be white or light grey on a darker background.
16. The two bottles in which the thorium residue is stored were not labeled. These two bottles contain 100 to 995 grams of thorium total. This is about 100 microcuries maximum which according to 10 CFR 20.203(f)(2) does not require a label.
17. The licensee's records were checked and found to be adequate. The maximum exposure to any employee was 50 mr in one month.
18. After the inspection a discussion of the findings was held with Dr. Kleber. The condition of the labels on the containers was called to his attention and he stated he would acquire the proper labels and see that they are placed on the barrels.