

48-2374

Kaiser Aluminum
CORPORATE ENVIRONMENTAL

June 4, 2001

Document Center
United States Nuclear Regulatory Commission
Washington, D. C. 20555-0001

Dear Sir or Madam:

Attached is information about the Kaiser Aluminum & Chemical Corporation's Thorium Project in Tulsa, Oklahoma.

Included are a letter to neighbors, a fact sheet, a handout regarding radiation doses, and questions and answers.

Beginning tomorrow, Kaiser representatives will hand deliver and discuss this information with neighbors of the site, some city and elected officials, and community leaders. A copy also will be placed in the public repository at the Nathan Hale Library in Tulsa.

Sincerely,



J. W. (Bill) Vinzant, P.E.
Manager, Corporate Environmental Affairs

enclosures

- cc: Mr. John T. Buckley
- Mr. Louis S. Carson II
- Ms. Pamela Bishop
- Mr. Miles Tolbert
- Mr. Scott Van Loo
- Mr. Al Gutterman
- Mr. Carl Parott

NMSS01 Public

KAISER ALUMINUM
CORPORATE ENVIRONMENTAL

June 1, 2001

Dear Neighbor:

In May, Kaiser Aluminum & Chemical Corporation completed work to remove soil containing thorium from properties adjacent to the company's location at 7311 East 41st Street in Tulsa. Pending final approval by the Nuclear Regulatory Commission (NRC) this marks the completion of the first phase of work to address soil containing above-criteria levels of thorium at the former operating facility. We are pleased to let you know this work was completed without any environmental or safety incidents.

The field work began in October 2000. It included removing 285,000 cubic feet of material from property owned by Specific Systems, Smalley Equipment, Beejay, Inc., and Red Man Pipe and Supply Co., as well as from Union Pacific Railroad's right-of-way property, and from the north side of East 41st Street between the roadway and Kaiser's building. The material was moved to Kaiser's property and will be part of the second phase of work.

As a result of the work recently completed, the soil at the properties listed above meets the NRC standards for unrestricted use. A Final Status Survey Report is being prepared and will be submitted to the NRC.

Kaiser is especially grateful to Specific Systems, Red Man Pipe and Supply, and Smalley Equipment, as the work conducted on their property was extensive. We also are grateful to Red Man Pipe and Supply and Detroit Diesel for allowing us to place air monitors on their property.

We now are preparing to enter the second phase of the work. Enclosed is a fact sheet describing Kaiser's proposed plan of action which was recently submitted to the NRC for their review. Questions and answers about the project also are attached. A full copy of this "Decommissioning Plan" has been placed in the Reference Department of the Nathan Hale Library, 6038 East 23rd Street in Tulsa. Also, if you have questions about the project, please call the Kaiser-Tulsa Community Information Line toll-free at (800) 250-3871.

Sincerely,



J. W. (Bill) Vinzant, P.E.
Manager, Corporate Environmental Affairs

Enclosures

Fact Sheet

June 2001

Kaiser Aluminum's Tulsa facility working with NRC on thorium residue

Kaiser Aluminum & Chemical Corporation is working with the U. S. Nuclear Regulatory Commission (NRC) to determine the final course of action to deal with soil containing low levels of thorium at its plant site located at 7311 East 41st Street in Tulsa. According to the NRC, the site does not pose an immediate health hazard.

Background

Kaiser bought the Tulsa plant from Standard Magnesium Corporation in 1964. Scrap magnesium from aircraft components manufacturing was processed there on an intermittent basis between 1958 and 1970. The scrap contained up to 4 percent thorium, a naturally occurring radioactive element present in trace quantities in the Earth's crust. The recycled scrap magnesium was mixed with pure magnesium at Tulsa to make anodes used to prevent corrosion in tanks and pipelines.

Regulations of the NRC and its predecessor, the Atomic Energy Commission (AEC), authorize products with low concentrations of thorium to be distributed to the public. Because the plant was processing a material containing thorium, this activity was conducted under a license issued by the AEC. The residual slag from this process contained thorium and was disposed of in an area immediately behind the plant under the terms of the AEC license and regulations. Kaiser discontinued processing the scrap in 1970, and the AEC license was terminated — at Kaiser's request — in 1971.

Investigative Activities

An NRC inspector toured the Tulsa facility in November 1993 as part of a routine process of revisiting previously licensed sites and found radioactivity exceeding "background" levels in the area behind the plant. The conclusion of the NRC inspector was that there was no immediate health hazard, and this finding has been confirmed in every periodic NRC inspection since then as well as by a health physicist retained by Kaiser. The 10-acre area is fenced and posted with warning signs. Moreover, the radiation levels are so low that, if a person were to stand on the spot of maximum radioactivity concentration for an hour, the dose would be similar to that received when flying two hours on a commercial airplane.

To evaluate present conditions and determine a remediation policy, Kaiser retained environmental consultants who have been collecting and analyzing soil and water samples on the plant site and on adjoining properties. The results of these investigations showed soil containing thorium in areas which are now adjacent to the Kaiser property along the eastern boundary — areas which belonged to Standard Magnesium during licensed operations. No contamination was found more than 120 feet beyond Kaiser's current property line.

Project Status

From October 2000 through May 2001, Kaiser completed the field work for the first phase of the remediation by removing soil and other material containing thorium from neighbors' property. More than 285,000 cubic feet of material was moved to Kaiser's property. Material also was removed from right-of-way property of Union Pacific Railroad, and from the north side of East 41st Street. Pending final approval of this work by the NRC, the neighboring property now meets NRC standards for unrestricted use. This designation means the property may be used for any purpose allowed by local zoning, without restriction.

Phase 2 of the project is the final remedy to address the soil containing thorium at Kaiser's former plant site, as well as the material that was moved to the site from the neighbors' property.

Kaiser performed an engineering evaluation and has submitted a proposed remediation plan to the NRC.

Under Kaiser's proposed cleanup, material will be removed to achieve a cleanup level that meets the NRC criteria for unrestricted use. The material remaining will present no risk.

The proposed remediation plan is preferred by Kaiser because it achieves the best balance of criteria considered in the evaluation. The proposed plan:

- Protects human health and the environment.
- Complies with all regulatory requirements.
- Allows for a permanent remedy with unrestricted release of the property.
- Utilizes proven technology.
- Is cost effective.

Kaiser submitted its proposal to the NRC June 1. The process will include a period of review and comments by the NRC. Following approval of the plan, the process will take approximately three to four years to complete.

For More Information

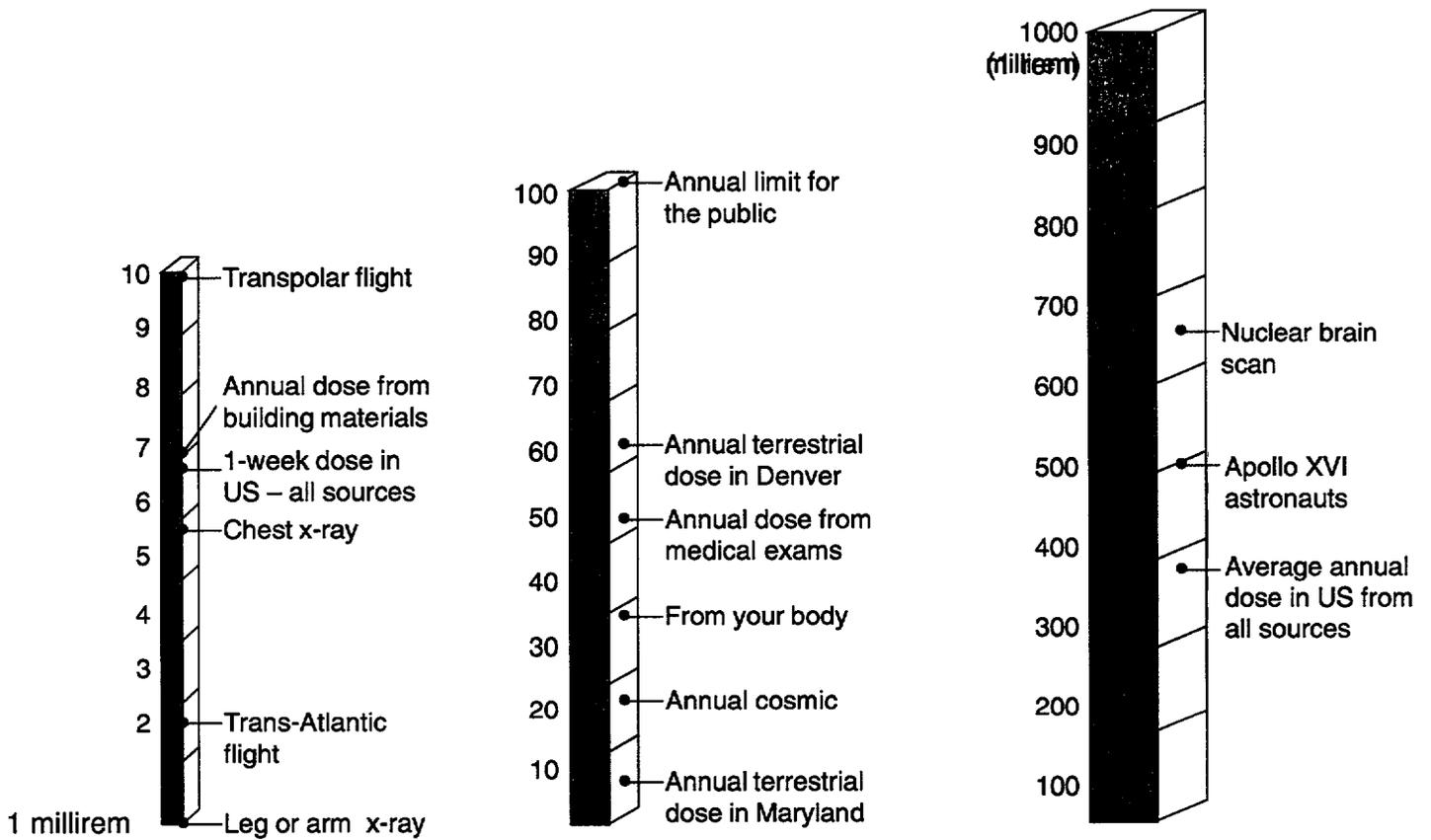
Kaiser is committed to conducting a thorough, effective cleanup of the site, and to communicating with the public about the work. A copy of the proposed plan, referred to as the "Decommissioning Plan," is available for public inspection in the Reference Department of the Nathan Hale Library, 6038 East 23rd Street, Tulsa.

Also, a Community Information Line for questions or comments about the project is available, toll free, at (800) 250-3871.

For more information, call toll-free: 1-800-250-3871

RADIATION DOSES IN PERSPECTIVE

- Dose is a measure of the amount of energy absorbed from radiation.
- The Nuclear Regulatory Commission's standard for unrestricted release of a site is based on a dose of 25 mrem per year.



This information was compiled from a variety of sources.

**Questions and Answers on Thorium Residue Project
at Kaiser's Tulsa Plant**

Adjacent Land Remediation - Phase 1

- Q. What was removed from the neighboring properties?
- A. Approximately 285,000 cubic feet of material containing thorium was removed from four neighboring businesses' property, from the Union Pacific Railroad right of way, and from an area between 41st Street and a building on Kaiser's property. Most of the material was soil, but it also included some paving materials, underground pipe, and buried scrap.
- Q. How did the material get to the neighbors' property?
- A. Based on old aerial photographs and interviews with former Kaiser employees, it has been determined that thorium was initially deposited at locations which are not now Kaiser property. At the time when most of the thorium was deposited, the current Kaiser property and the surrounding property were all part of Standard Magnesium (the previous owner of the plant).
- Q. Where is the material that was removed now?
- A. The material removed from the neighbors' property was taken to Kaiser's property. It is being stored there now, covered with a plastic liner to prevent erosion. The second phase of work will address this material, as well as other soil containing thorium that was already at the site.
- Q. Is there any danger associated with the property where the soil was removed?
- A. No. The soil at the neighbors' property now is well within the NRC criteria for unrestricted use. This means the property may be used for any purpose allowed under current zoning.

Phase 2 - The Proposed Remediation Plan

Q. Where is the contamination at the site?

A. The highest levels were found in a vacant area behind the plant--an area that is fenced, posted, and off-limits to employees and to the public.

Q. Does the site pose a danger?

A. The NRC has stated the site does not pose an immediate health hazard. To put the levels into perspective, if a person were to stand on the spot of maximum radioactivity concentration for one hour, the dose would be similar to that received when flying two hours on a commercial airliner.

Q. Are the buildings contaminated?

A. Thorium-bearing material may exist under some of the buildings, as well as under concrete covered areas. Additional studies are planned to learn whether this is the case.

Q. Is groundwater affected?

A. The groundwater has not been affected. Some elevated results have been observed in the area of the retention pond where the most elevated thorium concentrations were observed.

Q. What are the criteria for determining the cleanup standards?

A. The NRC standards are based on "dose." Dose is a measure of the amount of energy absorbed from radiation. Dose is usually expressed in millirem (mrem) over time.

To put dose into perspective, the average dose of radiation from all sources to a U. S. resident is 360 mrem per year. To further illustrate, a person flying on a trans-Atlantic flight is exposed to 2.5 mrems.

Kaiser's proposed plan for the remediation would result in the property being released for unrestricted use. The NRC's standard for unrestricted release of the property is 25 mrem per year. In fact, the proposed plan would result in a lower dose rate than this.

Q. How much will the remediation cost? Who pays for it?

A. It is difficult to estimate the total cost at this time. The cost of the remediation will be paid by Kaiser.

Q. What will be involved in the work?

A. The remediation as proposed would involve excavating soil to depths up to 15 to 20 feet. Standard construction equipment, such as backhoes, excavators, bulldozers, dump trucks, etc., would be used.

Q. Is the Kaiser plant across 41st Street affected?

A. No. There was no work activity involving thorium at that Kaiser location.

Q. What is the time schedule for the decommissioning process?

A. Kaiser submitted its proposed Decommissioning Plan to the NRC on June 1. The process usually involves a series of reviews, exchanges of comments and revisions. After the plan is approved, it is estimated the project will take three to four years to complete.

Q. How will the property be used in the future?

A. Kaiser has no plans at this time regarding how it may use the property in the future.

Q. How can I obtain more information?

A. Kaiser is interested in knowing and addressing your questions and any concerns you may have. A toll-free information line is in place and may be reached at (800) 250-3871.

Also, information about the project, including the Decommissioning Plan, is available in the Reference Department of the Nathan Hale Library located at 6038 East 23rd Street, Tulsa.