

U. S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No.: 040-03399 (retired)

License No.: C-4345 (retired)

Report No.: C-4345/96-01

Former
Licensee: Wheeling Tile Company

Locations: 3107 Eoff Street
Wheeling, WV

Current Site
Owner: Benny Battistelli

Address: 2737 Chapline Street
Wheeling, WV 26003

Date: August 12, 1996

Inspector: Jay L. Henson, Radiation Specialist

Approved by: John P. Potter, Chief
Materials Licensing/Inspection Branch 2
Division of Nuclear Materials Safety

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Enclosure

EXECUTIVE SUMMARY

Wheeling Tile Company
NRC Inspection Report No. C-4345/96-01

This routine, announced inspection was conducted to evaluate the current radiological status of facilities utilized by the former licensee under their License No. C-4345, which expired in October, 1960. This included discussions with cognizant former licensee employees, reviews of documents, and direct observations of the site where activities associated with the terminated license were performed.

Based on information in the retired license docket file and discussions with the current site owner and former Wheeling Tile Company employees, the inspector determined that it is possible that Wheeling Tile Company never possessed depleted uranium. The inspector also found that the part of the former Wheeling Tile Company facility where licensed materials would have been used and stored, had the licensee ever possessed material, had been demolished and paved over to make a parking lot for the current business located at 3100 Chapline Street.

Based upon the above information, the NRC has no further concerns regarding the radiological status of the former Wheeling Tile Company facilities that were located at 3107 Eoff Street, Wheeling, West Virginia.

LIST OF PERSONS CONTACTED

Former Licensee Employees

P. Harris, Glaze Mixer Operator
J. Brayce, Glaze Mixer Operator
E. Duffy, Glaze Area

Current Site Owner

*B. Battistelli

*Attended August 13, 1996, Exit Meeting

In addition, other former licensee staff were interviewed during the inspection.

REPORT DETAILS

01. Background (TI 2800/026)

License No. C-4345 was issued on October 10, 1958, for the possession of 2,000 pounds of depleted uranium for use as a coloring agent in glazes for ceramic manufacture.

In its application, the licensee described the facilities and processes involved in the production and use of the glaze containing the depleted uranium. Operations included weighing, milling in a wet ball mill, transfer of the glaze to a holding tank, and removal of increments of the glaze slurry for application to ceramic products by either hand dipping or spraying. The spraying would be conducted in a well ventilated spray hood equipped with a scrubber for recovering glaze entrained in the hood exhaust. The ceramic ware would be dried, loaded into kiln setters, fired in a kiln, unloaded, inspected and packaged. The licensee stated that periodic surveys with a portable survey instrument would be performed to determine the level of radiation at different points in the storage and processing areas. The licensee also indicated that traces of uranium from washing out of equipment would be well diluted with water prior to discharging to the sewer and that samples of effluents would be taken and monitored. The licensee stated that its experience prior to 1942 with normal uranium products showed that little uranium was lost in any of its operations.

The AEC planned to conduct an inspection of the licensee in December, 1958, but the licensee informed the AEC in November, 1958, that it had not obtained or used any depleted uranium under the license and had postponed its use of this material for a time.

In May, 1959, the AEC notified the licensee that it intended to amend its source material license to limit the use of uranium as a ceramic glaze to tableware and to tiles manufactured for experimental purposes. After receiving no reply to this notification, in June, 1959, the AEC issued an order amending the license to limit the content of uranium in glazes for ceramic tableware to twenty percent. The order also authorized the licensee to produce ceramic tiles glazed with uranium for the purpose of obtaining experimental data regarding the radiation levels associated therewith. It also defined ceramic tile to mean any piece of fired clay, stone, concrete or other material used in the construction or ornamentation of walls, partitions, floors, drains, or similar items; or in the construction or ornamentation of articles of furniture.

The retired docket file does not contain any information on the final disposition of the material, surveys performed by either the licensee or the AEC when the license was terminated or any document that indicates when the license was terminated. The license expiration date was October 31, 1960.

02. Current Site Status (TI 2800/26)

On August 13, 1996, an NRC inspector visited the former Wheeling Tile Co. site described in the license application as the location where licensed activities would be performed. The original facility at 3107 Eoff Street was comprised of several individual buildings which were adjacent to each other. The five level (basement and four stories above ground) building on the south side of the complex where the depleted uranium would have been stored, weighed, mixed in the ball mills, added to the tile glaze material, and applied to the tiles was demolished after the current owner purchased it in the early 1960s. The remaining buildings at the site were used to store the clays used to make the tiles, house the kilns used to bake the tiles, store the finished products, and as offices for administrative and management staff. The current site owner escorted the inspector through the remaining buildings at the site. The inspector determined that none of the original equipment that would have been used to manufacture the glaze that may have contained depleted uranium remained at the site and saw no other evidence that radioactive materials were used at the site.

The current site owner stated that in the late 1950s, Wheeling Tile Co. completed major renovations of its floor tile manufacturing facility at the site in an attempt to compete with foreign manufacturers. The major change involved the installation of new kilns that would enable Wheeling Tile to "fire" the tiles once, instead of two times. Despite the improvements, Wheeling Tile was unable to compete with the foreign manufacturers and ceased operations in the early 1960s. Shortly thereafter, Wheeling Tile sold much of its equipment to other tile manufacturers and sold the facility to the current site owner. After purchase, the current site owner removed what equipment remained in the facility and demolished the five level building where licensed materials would have been used and stored, if ever possessed. The site where this building was located is now a parking lot.

The inspector spoke to several former Wheeling Tile Company employees who remain in the area. Although the inspector was unable to locate any living, former members of management, he was able to contact a former employee (1936-1963) who worked in the glaze area and would have been responsible for weighing the glaze ingredients and placing them in the ball mills. The inspector described the information contained in the retired docket file and the special storage and handling procedures associated with the use of the depleted uranium. The former employee stated that he did not remember ever using depleted uranium, being informed that depleted uranium or any other radioactive material was used in the glaze, seeing any radiation warning signs or observing anyone performing any radiation surveys in his work area. The inspector spoke with several other former employees who did not work in the glaze area, but knew other employees who did or were otherwise familiar with the operations performed in the glaze area. None of these former employees remembered any reference, conversation or direct evidence that indicated radioactive materials were used at the facility.

Based on information in the retired license docket file and discussions with the current site owner and former employees, the inspector concluded that it was possible that Wheeling Tile Company never possessed depleted uranium. The inspector also concluded that if the former licensee had used depleted uranium, the facilities and equipment which had the greatest potential to become contaminated from the use or storage of the depleted uranium were no longer present at the site. The inspector had no further concerns regarding the radiological status of the facilities remaining at the site.

EXIT MEETING SUMMARY

The inspector presented the inspection results to the current site owner at the conclusion of the inspection on August 13, 1996. The inspector informed the site owner that based upon the information obtained and observations performed during the inspection, it was possible that the Wheeling Tile Company had not possessed material under License No. C-4345, and that if material had been possessed, the building where the licensed material would have been stored and used had been demolished. The current site owner expressed his belief that shortly after Wheeling Tile Company obtained its license, it determined that it may not remain in business and did not obtain any depleted uranium. The inspector informed the current site owner that based upon the information obtained during the inspection, it did not appear that there were any further concerns regarding the radiological status of the site or any remaining facilities at the site.

TEMPORARY INSTRUCTIONS USED

TI 2800/026: Followup Inspection of Formerly-Licensed Sites Identified As Potentially Contaminated