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State of California—Health and Human Services Agency  
**Department of Health Services**



GRAY DAVIS  
Governor

April 14, 2003

Paul H. Lohaus, Director  
Office of State and Tribal Programs  
U.S. Nuclear Regulatory Commission  
Mail Stop O-3-C-10  
Washington, DC 20555

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**SUBJECT: REGULATORY STATUS OF GLAZED CERAMIC TILES CONTAINING  
SOURCE MATERIAL**

Dear Mr. Lohaus:

This is a request for clarification on the regulatory status of glazed ceramic tiles containing up to ten percent by weight source material. The request is motivated by two recent informal interpretations, which appear to be conflicting, by the NRC of the regulations governing these items.

Specifically, the items in question are ceramic tiles, which contain source material in excess of 0.05% by weight, but less than 10% by weight. There are two distinct subsets of these tiles: 1) tiles containing source material throughout the volume of the tile, and 2) tiles containing source material solely in the decorative glaze.

The ultimate question is whether the NRC considers these tiles (one or both subsets) to be generally licensed pursuant to 10 CFR 40.22, if the total uranium or thorium contained in the total volume of tiles does not exceed fifteen pounds; or, whether they are considered to be exempt pursuant to 10 CFR 40.13(c)(iv), without regard to the exclusion of "ceramic tile...used in construction," in 10 CFR 40.13(c)(iii).

During 2001, the California Department of Health Services (DHS) referred a question from a U.S. General Services Administration (GSA) office in San Francisco, CA to the NRC, regarding the disposal of ceramic tiles, resulting from the decommissioning of a laboratory. The tiles were known to contain source material, however it is unknown whether the GSA tiles contained uranium throughout the tiles or only in the glaze. GSA had them analyzed by the University of Nevada at Las Vegas, who determined that the total volume of tiles in the GSA laboratory contained less than a total of twelve pounds of uranium. On that basis, Mr. Jack Whitten, of the NRC's Region IV office determined that the material was generally licensed pursuant to 10 CFR 40.22, and could be disposed without regard to the tiles radioactive component, and so advised GSA, and by copy of the communication, DHS.

Subsequently, in 2003, a DHS staff member queried Mr. Lloyd Bolling of your office regarding a situation, wherein several schools and private residences throughout the City of San Francisco were constructed using similar tiles as decorative accents in the 1940s and 1950s. In this more

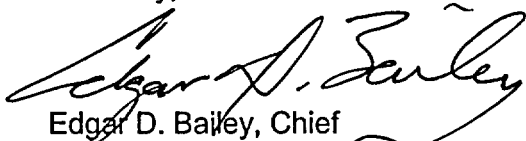
recent case, it appeared that only the glaze and not the tiles themselves contained source material, and it was Mr. Bolling's opinion that 1) they could not be generally licensed because they were not being used for "research, development, educational, commercial or operational purposes;" and, 2) they were exempt from regulation pursuant to 10 CFR 40(c)(2)(iv), since the glaze on the tiles in this case had been imported or distributed prior to July 25, 1983, even though the pre-existing exemption in 10 CFR 40(c)(2)(iii) expressly excludes from exemption any "commercially manufactured glass brick, pane glass, ceramic tile, or other glass or ceramic used in construction."

As noted earlier, there are two distinct cases, which may require separate treatment: 1) where the entire volume of tile and glaze contain source material, and 2) where only the tile glaze contains source material. In the former case, DHS assumes the tiles are not exempt, but according to Mr. Bolling they would also not be subject to the general license in 10 CFR 40.22, so should potentially have been specifically licensed. In the latter case, DHS is unclear as to whether the exemption in 10 CFR 40.13(c)(2)(iv) would apply, since the pre-existing exemption in 10 CFR 40.13(c)(2)(iii), expressly excludes from exemption "ceramic tile...used in construction;" and, since 10 CFR 40.13(c)(2)(iv) was promulgated (according to the Statements of Consideration) to address concerns about the use of glass enamel and glass enamel frit in cloisonné jewelry, and was silent as to the continued use of uranium- or thorium-bearing glazes in other applications.

DHS requests clarification as to the controlling regulations both where the entire volume of tile and glaze contain source material, and where only the glazing material contains source material.

Please contact Barbara Hamrick at 714-257-2031, if you have any questions with respect to this inquiry.

Sincerely,



Edgar D. Bailey, Chief  
Radiologic Health Branch  
California Department of Health Services

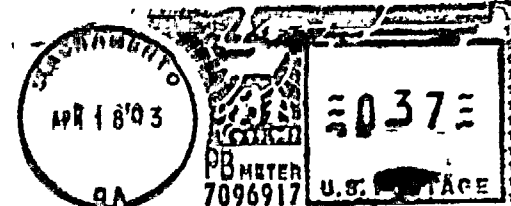
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