



DEPARTMENT OF HEALTH & HUMAN SERVICES

Memorandum

To: Advisory Board's Work Group on Kansas City Plant

From: Peter Darnell, DCAS Health Physicist
Pat McCloskey, ORAU Team Health Physicist
Muttu Sharfi, ORAU Team Principal AWE Dosimetrist

Subject: KCP suspension of Mg-Th operations

Date: September 18, 2015

NIOSH received SC&A's memo, (Review of NIOSH Response to SC&A's Review of Internal Exposures to Thorium and its Progeny at the KCP during Mg-Th Machining, July 7, 2015), and provides the following response.

In their August 14, 2015 Memo, SC&A identified concerns with the NIOSH position that Mg-Th machining operations were suspended from April 1, 1963 through August 27, 1970.

SC&A noted inventory references (SRDB 135987 and 137786) provided by NIOSH to corroborate the suspension "do not cover the period 1963–first semester of 1969". However, NIOSH noted that in SRDB 135987 (Station AQA Statement of Measurement Methods 1969-1978), the first mention of receiving shipments of Mg-Th is in August of 1971. Mg-Th was not listed in any prior letter. On page 50 of the pdf, there is a letter that points out they will start receiving Thorium in the form of Mg-Th. After that time, Mg-Th is listed on the receipt lists. NIOSH finds this to be reasonably strong evidence that there was not Mg-Th on site from at least July 1969 to August 27, 1970.

Until NIOSH locates additional information that suggests KCP's controlled machining operations did in fact occur during the suspension period, we will interpret the absence of records, including NMMS, to mean the operations were suspended. Interviews of former employees such as the following shed some light on the on-again off-again nature of KCP's weapons support for Sandia, "The KCP has always been involved in special "piece-work," that is, numerous, small, isolated projects relying on high-quality machining" (SRDB 127484 p. 9).

SC&A notes that Department 20 was maintained as a Radiological Area during the suspension period. NIOSH agrees that a small amount of Depleted Uranium machining occurred during the time in question; however, we do not find this to be an indication that Mg-Th machining also occurred.

SC&A notes that a June 24, 1965 memo (SRDB 123895, p. 155) citing machining of radioactive material, including “classified radioactive material”, indicates Mg-Th operations were not suspended. However, NIOSH is aware that certain DU machining operations were considered classified, and other operations such as the machining of DU oxide have been recently declassified (SRDB 127484, p. 6). Therefore, NIOSH does not interpret information that indicates work with classified radioactive material to necessarily mean Mg-Th machining.

SC&A indicates that since there are uranium air monitoring records (SRDB 128373) for Department 20/22 during the suspension period, that there could have been ongoing Mg-Th work. However, NIOSH did not find thorium listed as the contaminant of concern on the referenced records, and because KCP has demonstrated the importance of listing thorium on records when it is appropriate (108264, p. 16), NIOSH disagrees with this assertion.

SC&A concludes with, “there is no substantial evidence of the suspension of work with radioactive material in Department 22/20 during the entire April 1963 to August 1970 period. For the period 1963–1970, information remains lacking regarding the location, specific timeframe, and workload for Mg-Th machining.”

NIOSH did not mean to imply there was a suspension of all Rad work, only Mg-Th. However, NIOSH agrees there is no document indicating Mg-Th machining was suspended. NIOSH will continue to search for more information, and will in the interim, rely on the bulk of evidence.

SC&A recommended that NIOSH should do suitable sample dose reconstructions to illustrate the application of 3E-11 $\mu\text{Ci}/\text{mL}$ air concentration limit in a claimant-favorable scenario. NIOSH will provide those sample dose reconstructions to the Work group separately.

Reviewed and Concurred by:

[Redacted signature]

Date: 9/18/2015

Peter Darnell, CHP, RRPT
Health Physicist