

# Kansas City Plant Work Group Report

Presented at the ABRWH meeting

Richland, WA.

March 25, 2015

# Work Group Members

Josie Beach, Chair

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# Kansas City Plant



# Work Group Activities to date

- Two Work Group meetings held in June 2014 and January 2015
- One Technical call
- Four site visits conducted jointly with NIOSH, SC&A and Board members for data capture including interviews, most recent on March 2-5, 2015
- Review of classified records at DOE/Germantown.

# Summary of Open SEC Issues

- 1- Data Completeness, legibility, and Accuracy - NIOSH to provide sampling plan for validating electronic database for both internal and external dose.
- 7 - Radioactive Waste – During recent site visit, SC&A and NIOSH identified former workers who were not bioassayed while handling uranium and Mg-Th waste. NIOSH to review and propose DR approach.
- 9 - External Coworker Dose - The same as for issue #1; NIOSH to provide sampling plan for validating KCP electronic external dose records with original raw records.
- 11- N/P issues - NIOSH will provide or identify location of 35 data points to SC&A, with SC&A to report back its conclusions, including any remaining questions and comments.
- 13 - Mg-Th Alloy Operations - SC&A to complete its review of the NIOSH white paper and provide a formal response. Recent onsite effort directed at obtaining additional information regarding 1966-1970, Department 20/22, and 1971-1979 Model Shop Mg-Th operations.

# Summary of Open SEC Issues Cont.

15 - Thorium Oxide Operations - Key clarification achieved during recent site visit; SC&A to complete final review of SRDB and NMMSS records.

16 - Natural Uranium, 1950-1958: application of TBD-6000 – SC&A validated application of TBD-6000 for unmonitored natural uranium fabrication for 1950-1955 and for the 1955-1958 residual period, assuming no other rad activities present. NIOSH provided radiological mapping for WG review.

17 - D&D activities – During recent site visit, SC&A and NIOSH identified unmonitored workers involved in internal KCP D&D; SC&A to clarify possible path forward on what data or information would provide for a NIOSH follow-up analysis and DR approach.

18 - Accidents, Incidents, & Fires, in workers records – The WG continued searching for additional incident reporting during recent KCP site visit; latest KCP documents collected to be reviewed.

20 – Tritium -NIOSH to update white paper with new information on organic tritium source term; latest KCP documents collected to be reviewed.



Troost Ave

NNSA  
Kansas City Plant

GSA

GSA

Bannister Road

**LEGEND**

- DOE Custody & Control █
- DOE per Permit █
- GSA █

# Summary of TBD Issues

(Issue 2 & 3 combined & moved to site profile issues matrix)

**2 - Worker Location, job category and coworker model** – Questions revolved around free movement of workers across facility and how clear worker job categorization was accomplished. Remaining issue revolved around implementation of coworker model (but not feasibility). Additional information regarding the adequacy and completeness of data used for a coworker model and its applicability to various job categories was also retrieved and will be incorporated in the next TBD revision.

**3 - Chronic vs. Acute** - Work group agreed that the question regarding chronic versus acute intake patterns does not represent an SEC issue and can be accommodated by the TBD 6000 model. The issue of unexplained higher bioassay readings in 1960-1961 will be addressed under matrix issue #18; as part of the review of KCP incidents.

**10 - Non-penetrating Dose** - Clarification was needed on how non-penetrating dose would be calculated from the recorded data to determine if appropriate data was recorded for DR purposes. WG agreed that these external dose record terms can be clarified and included in an update of the TBD.

# Summary of Closed SEC Issues

**4 - Super S Uranium** – While it was likely that some of the uranium handled at KCP was “high fired,” there is no clear evidence of insolubility that would preclude dose reconstruction with sufficient accuracy.

**5 - Recycled Uranium** – TBD 6000 addresses recycled uranium in its model calculations. NIOSH will assume recycled uranium was present at KCP and perform dose reconstructs accordingly.

**6 - DU after 1971 and during and after 1997** – DU ballast parts were fabricated offsite and would not have presented an exposure potential for workers handling them at KCP. No other DU materials unaddressed by the ER were identified during recent onsite data captures.

**8 - Metal Tritides** –WG agrees that the exposure potential at KCP to metal tritide contamination was minimal and isolated, with no evidence of worker uptake.

**12 -Fading of NTA** – Evaluation of the neutron sources and their utilization indicate that low-energy moderated neutrons would not constitute a significant portion of the neutron dose; therefore, fading of the low-energy neutron tracks would not be a major issue. Additionally, individual neutron readings will not be used in DR; instead, a 95th percentile coworker value assigned for workers potentially exposed.

**14 - Post-1993 monitoring** – All documentation in the years between promulgation of 835 and its implementation at KCP by 1993 indicates a comprehensive approach by KCP and DOE to ensure compliance. This included DOELAP accreditation for KCP in November 1992.

**19 - Potentially Unmonitored Exposures** –Tritium was the only source term either not discounted or not addressed adequately in the ER. The question of tritium as a potential exposure source at KCP will be addressed in Matrix item #20.

# Next Steps

- Next scheduled WG meeting is planned for Mid-May. This will include a ½ day for petitioners to present concerns to the WG and full day for completion of WG issues.

