



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005**

June 28, 2005

Mr. Russell H. Jones, Project Manager
Kerr-McGee Chemical L.L.C.
Technical Center
P.O. Box 25861
Oklahoma City, OK 73125

SUBJECT: APPROVAL OF KERR McGEE CHEMICAL L.L.C. FINAL STATUS SURVEY REPORT (FSSR) FOR INDOOR SURVEY UNITS AND EMBEDDED PIPING ANALYSIS

Dear Mr. Jones:

The U.S. Nuclear Regulatory Commission "NRC" staff has reviewed the indoor final status survey results as submitted on April 15, and changes as submitted on April 27, 2004, for the Kerr McGee Chemical L.L.C., Technical Center (KMTTC), license number SUB-986. This review was conducted in accordance with the Consolidated NMSS Decommissioning Guidance, Volume 2, Section 4.5, "Final Status Survey Report."

The NRC staff has also reviewed the specific dose analysis for the embedded and buried piping at the Technical Center which were submitted in the form of two technical memorandums (e.g., TM 04-02 and TM 04-03) presented in Appendix 6 and 7 of the indoor FSSR. Upon review of the technical memorandums, the NRC staff requested additional information that would allow an adequate evaluation of the buried and embedded piping modeling analysis. The NRC subsequently received, by letter dated December 3, 2004, three new technical memorandums designated: TM 04-26, TM 04-28, and TM 04-29. The NRC staff has completed their review of the respective technical memorandums.

The technical memorandums evaluated the dose impacts related to contamination in embedded piping at the KMTTC facility. Multiple exposure scenarios and different assumptions for the piping source term were evaluated. One example included the building renovation scenario, in which exposures associated to all receptor activities for removing, cutting, stockpiling and disposal of the pipes as a slab source term were evaluated. Another exposure scenario assumed that the pipes would remain undisturbed and a worker would occupy the laboratory for 2000 hours. The submitted dose evaluations and assumptions appear to be reasonable and sufficiently conservative.

NRC staff analyses, using RESRAD-BUILD code and realistic scenario assumptions, indicate that the dose related to the proposed embedded piping derived concentration guideline levels (DCGLs) would be a small fraction of the unrestricted use dose criteria specified in 10 CFR 20 Subpart E. The NRC staff found that the use of the "Monte Carlo N Particle" (MCNP) code (a software code developed by Los Alamos National Laboratory) for establishing the relationship

between the NaI detector count rate and the surface activity (e.g., the DCGLs) is acceptable. Therefore, NRC approves the derived embedded piping DCGLs.

Based on this review, the NRC staff has determined that Kerr McGee Chemical L.L.C. has demonstrated to the NRC staff that the licensee's indoor survey units and embedded and buried piping meet the radiological criteria for license termination. The NRC will proceed to terminate your license. Once the impending termination has been announced in the *Federal Register*, the final license termination will be forwarded to you under separate correspondence.

If you have any comments or questions concerning this letter, please contact Rachel Browder at (817) 276-6552 or the undersigned at (817) 860-8191.

Sincerely,

/RA/

D. Blair Spitzberg, Ph.D., Chief
Fuel Cycle & Decommissioning Branch

Docket No.: 040-08006
License No.: SUB-986

cc (via ADAMS distrib.):
 LDWert
 CLCain
 JEWhitten
 DBSpitzberg
 RSBrowder
 RJEvans
 RIV Materials File Room (5th Floor)

SISP Review Completed: RSB ADAMS: Yes No Initials: RSB
 Publicly Available Non-Publicly Available Sensitive Non-Sensitive
 E:\Filenet\ML051790112.wpd

RIV:DNMS:NMLB	C:NMLB	C:FCDB		
RSBrowder*	JEWhitten*	DBSpitzberg		
<i>/RA/</i>	<i>/RA/</i>	<i>/RA/</i>		
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*Previous Concurrence