



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

APR 25 1994

Docket No. 40-07580
License No. SMB-911

Fansteel, Inc.
Attn: Mr. John J. Hunter
Corporate Manager
Process Engineering and
Facilities Construction
Number Ten Tantalum Place
Muskogee, Oklahoma 74401

Dear Mr. Hunter:

SUBJECT: CLOSURE OF DEEP AQUIFER WELLS

By letter dated December 28, 1993, in accordance with Condition 26 of radioactive materials license No. SMB-911, Fansteel Inc. submitted the final report for the remedial assessment of its Muskogee, Oklahoma facility. In your letter you requested that Nuclear Regulatory Commission staff expeditiously review your request to abandon the deep aquifer wells at the Muskogee, OK facility, as you felt that closure of these wells now would abate the potential impacts caused by their communication with the surface. NRC staff is continuing to review your remedial assessment and we expect to complete our review of the entire report within a few months. When staff has completed its review we will forward our comments on the report to your attention.

However, staff has reviewed the information presented in the remedial assessment report concerning the deep aquifer wells and does not agree that these wells should be abandoned at this time because:

- 1) The determination that the deeper aquifer is not contaminated is inconclusive. With the exception of a few constituents, only one analysis was made of constituent concentrations in each well. In addition, a statement on page 4-35 of the report indicates that the initial analyses of significant radioactivity in well MW-151D may have been due to a laboratory error. Further, the fluoride concentration in well MW-174D and the lead concentration in well MW-161D may indicate some contamination of the deep aquifer. Both concentrations are above the EPA's drinking water standard of 4 mg/l and 0.05 mg/l, respectively. Finally, measurable levels of ammonia were detected in wells MW-161D, MW-167D, and MW-174D. Therefore, instead of abandoning these wells, it seems more appropriate that additional samples be taken from these wells and constituent concentrations be reanalyzed.
- 2) Staff has not completed its review of all of the site characterization information. A complete review of all of the site information may determine that additional wells need to be installed at other locations around the site. In addition, the report provides no information on the specific zones within the aquifer from which the samples were collected.

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Fansteel, Inc.
Docket No. 40-07580

Letter dated: APR 25 1994

Allyn Davis, U.S. Environmental
Protection Agency, Region VI

Lloyd Kirk, Oklahoma State
Department of Environmental Quality

H. A. Caves, Oklahoma State
Department of Environmental Quality

L. Hughes, Native Americans
for a Clean Environment

Mr. John J. Hunter

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As such, it is impossible to determine whether the samples are representative of the conditions as they exist in the aquifer. Contour maps delineating contamination plumes within the shallow aquifer would be helpful in determining whether the deep wells are optimally located. Also, submission of water quality data in a digital format (e.g. on computer disks), in addition to the hard-copy format, would greatly facilitate the review of the characterization of both the shallow and deep aquifers.

Based on the well construction information provided in the report, the four deep wells appear to be properly designed to prevent cross-contamination. Therefore, there should be no immediate urgency to close these wells. If you believe otherwise, please notify me promptly along with the basis for this belief.

If you have any questions concerning the staff's review of your request, please feel free to contact me at (301) 504-2566.

Sincerely,

Original Signed By

Dominick A. Orlando, Project Manager
Low-Level Waste and Decommissioning
Projects Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

cc:

See attached list

Ticket: N/A

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