

January 9, 1990

Note to: W. S. Pennington, IMUF
FANSTEEL, INC.

To assist in reviewing a licensing action, a copy of the proposed license conditions (enclosed) was forwarded to Fansteel, Inc., on January 4, 1990. A copy has also been provided to the Public Document Room.

Original Signed By:

Ginny Tharpe, IMUF

Enclosure: As stated

Distribution w/encls.
Docket No. 40-7580
GLaRoche

PDR VLTharpe
IMUF R/F IMSB R/F

FBrown

GFC:IMUF: _____
NAME: VLTharpe: _____
DATE: 1/9/90: _____

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FANSTEEL CONDITIONS

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Fansteel, Inc., Docket 40-7580

<u>Material</u>	<u>Form</u>	<u>Quantity</u>
A. Natural uranium	A. Tin slags, ores, ore concentrates, and waste residues	A. 30,000 kg uranium
B. Natural thorium	B. Tin slags, ores, ore concentrates, and waste residues	B. 67,000 kg thorium

Authorized use: For use in accordance with statements, representations, and conditions contained in Part 1 (Chapters 1 through 5), Part 2 (paragraphs 5 and 6 on page 6-5 and Sections 6.3 and 6.4 in Chapter 6), and the Radiation Safety Manual (Sections 3.1, 3.2, and 3.3) of the revised application dated October 16, 1987 (submitted by letter dated November 3, 1987); and supplements dated April 20, 1988; and February 28 and June 22, 1989.

Authorized place of use: The licensee's existing facilities at Muskogee, Oklahoma.

Notwithstanding the education requirement in Section 2.2, Part 1, of the revised application, the Plant Radiation Safety Officer (PRSO) and Alternate PRSO shall each possess a bachelor's degree in the biological or physical sciences, engineering, or industrial hygiene.

The minutes of the Radiation Safety Committee meetings shall be submitted, as a minimum, to the Committee members.

In addition to its other safety oversight functions, the Radiation Safety Committee shall review and evaluate at least every 12 months personnel exposure data, bioassay results, unusual occurrences, airborne radioactivity levels, effluent releases, and environmental monitoring to determine the following:

- a. If there are any upward trends developing in personnel exposures for identifiable categories of workers or types of operations, effluents, or concentrations of effluents in environmental samples.
- b. If exposures and effluents might be lowered in accordance with the ALARA concept.
- c. If equipment for effluent and exposure control is being properly used, maintained, and inspected.

FANSTEEL CONDITIONS

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Prior to implementation, new and revised operating procedures for activities involving licensed material shall be evaluated by the Radiation Safety Committee and approved by the Plant General Manager and the Plant Radiation Safety Officer. Operating procedures shall be reviewed for adequacy at least every 2 years by the Radiation Safety Committee.

Within 6 months of the issuance of the license, the licensee shall develop and implement written procedures for radiation safety activities required by the license.

Notwithstanding the inspection frequency in Section 2.7, Part 1, of the revised application, radiation safety inspections of facility operations shall be performed and documented quarterly by the PRSO or Alternate PRSO.

Within 90 days of the issuance of the license, the licensee shall develop and implement a formal procedure for the timely review and completion of corrective actions for deficiencies identified during audits of the radiation safety program and inspections of facility operations.

The licensee shall administer a written test to plant personnel to determine the effectiveness of the initial and refresher radiation safety training and maintain records of the tests and test results.

Notwithstanding Section 3.5, Part 1, of the revised application, the licensee shall 1) perform continuous, representative sampling of individuals' breathing air when measurements of concentrations of radioactive materials in air are necessary to demonstrate compliance with 10 CFR 20.103; 2) determine the average intake of radioactive materials by inhalation in accordance with 10 CFR 20.103(a)(1); 3) evaluate the cause and take corrective actions to prevent recurrence if an air sample indicates that the gross alpha activity in an individual's breathing air exceeds the maximum permissible concentration (MPC) for natural thorium (6×10^{-11} microcuries/milliliter) or 25 percent of 40 MPC-hours during any 7 consecutive days.

In addition to the protective clothing requirements in Section 3.7, Part 1, of the revised application, the licensee shall require the use of protective clothing for the hands of individuals who handle ores, tin slags, or waste residues containing radioactive material.

Notwithstanding Section 3.9, Part 1, of the revised application, for individuals required to be monitored in accordance with 10 CFR 20.103, the licensee shall, as a minimum, collect and evaluate on a quarterly basis 24-hour urine and fecal samples to assess individuals' whole body depositions of uranium and thorium. The samples shall be collected in an area free of contamination and after the individual has been removed from the contaminated work area for 2 days.

Prior to the release of facilities and equipment for unrestricted use, the facilities and equipment shall be decontaminated in accordance with the enclosed "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," dated August 1987.

Notwithstanding Section 4.4, Part 1, of the revised application, the licensee shall investigate and take corrective actions when the concentration of radioactive material in liquid effluents exceeds 10 percent of the concentration found in 10 CFR Part 20, Appendix B, Table II.

Within 6 months of the issuance of the license, the licensee shall develop and implement a continuous stack monitoring program that will provide measurements of radioactivity released in air effluents when the plant is operating.