NRC FORM 374 U.S. NUCLEAR REGULAT	ORY COMMISSION					
MATERIALS LICENSE						
Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.						
Licensee						
1. Fansteel, Inc.	3. License Number SMB-911, Amendment 10					
2. Number One Tantalum Place	4. Expiration Date September 30, 2002					
North Chicago, Illinois 60064 、 EAN BEG	5. Docket No. 40-7580					
CLE	Reference No.					
6. Byproduct Source, and/or Special Nuclear Material Form	ysical 8. Maximum amount that Licensee May Possess at Any One Time Under This License					
Natural uranium Any Any and thorium	400 tons as elemental uranium and thorium					
<ul> <li>A. Natural Uranium</li> <li>B. Natural Thorium</li> <li>B. Natural Thorium</li> <li>A. Tin slags, ores, concentrates, process residue and uranium ox</li> <li>B. Tin slags, ores, concentrates, process residue and thorium hyperiod</li> </ul>	A. 43,000 kg uranium A. 43,000 kg uranium B. 71,000 kg thorium					
C. Natural Uranium C. As a contamina in soil and sediment	nt C. 4,000 kg uranium					
D. Natural Thorium D. As a contamina in soil and sediment	nt D. 2,500 kg thorium					
9. Authorized place of use: The licensee's existing Fansteel Property identified as the Northwest Pro Additional Radiation Survey Activities Report date description provided thereon, is released from the the statements and representations made in the December 28, 1993; May 24, July 27, and Decen March 16, 1996.	facilities at Muskogee, Oklahoma. The portion of the operty in Figure 2, Dwg. No. 0111210, of the licensee's ed December 1995, and as defined by the legal e restrictions of this license. This release is based on application dated July 8, 1993, and supplements dated nber 1, 1994; December 18, 1995; and					

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		License Number SMB-911				
	MATERIALS LICENSE	Docket or Reference Number				
	SUPPLEMENTARY SHEET	40-7580				
		Amendment No. 10				
10.	Authorized use: For use in accordance with statements Part I (Chapters 1 through 5) of the application submitt supplemented by letters dated February 3, May 17, Jul 2002.	s, representations, and conditions contained in ted by letter dated May 10, 1999, and ly 7, 1999, January 25, 2000, and March 5,				
11.	Deleted by Amendment 4, dated March 1999.					
12.	The licensee shall have a qualified Plant Radiation Safety Officer (PRSO) on site for all licensed activities.					
13.	Deleted by Amendment 2, dated February 1999.	A>				
14.	The minutes of the Radiation Safety Committee meeting shall be submitted, as a minimum, to the Committee members.					
15.	Deleted by Amendment 2, dated February 1999.					
16.	Deleted by Amendment 5, dated May 1999.	ö				
17.	Deleted by Amendment 2, dated February 1999.	shite A				
18.	Deleted by Amendment 4, dated March 1999.	S S				
19.	Deleted by Amendment 4, dated March 1999.	S				
20.	Deleted by Amendment 6, dated August 1999.	.01				
21.	The licensee shall review the decommissioning cost es intervals not to exceed thirteen (13) months. The estin appraisal of waste volumes, costs, and disposal methor estimate shall also be updated to reflect changes in thi 1 percent.	stimate by June 25, 2002, and thereafter at nate shall be adjusted to reflect the current ods. Financial instruments to assure the cost is amount, if the amount increases by more than				
22.	Deleted by Amendment 6, dated August 1999.					
23.	Deleted by Amendment 2, dated February 1999.					
24.	The licensee shall notify all recipients of solid products each batch transferred.	/waste of the concentration of radionuclides in				

25. All source material stored outside of the process buildings at the Fansteel facility (other than material contained in the ponds) shall be placed on raised pallets on a concrete pad. The area shall be sheltered by a roof and shall be surrounded by a concrete berm for containment.

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		License Number SMB-911				
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26.	Remediation and decommissioning activities at the N with the decommissioning plan and supplemental co 1999 and supplemented by letters dated July 16, 199	Iuskogee facility shall be performed in accordance respondence submitted by letter dated June 16, 99, and November 9, 2000.				
27.	The licensee shall use the following criteria for release	se for unrestricted use:				
	Groundwater activity:					
	30 pCi/L of uranium (U-238, U-235, and U-23 15 pCi/L adjusted gross alpha (gross alpha e	4) and cluding radium-226 and uranium);				
	Soil activity:	NA NO				
	10 pCi/g from any combination of natural ura	nium and thorium;				
	Exposure rate from soil:					
	10 micro-roentgen ( $\mu$ R) per hour (hr) above background at one meter (m) from the surface averaged over a 100 m <sup>2</sup> grid, where the maximum may not exceed 20 $\mu$ R/hr;					
	Activity on equipment and structure surfaces:	N N				
	Surraces are to be cleaned to the release lim	ts for natural thorium:				
	1,000 dpm per 100 cm <sup>2</sup> alpha radioactiv 200 dpm per 100 cm <sup>2</sup> alpha radioactivity	ity, total; , removable;				
	3,000 dpm per 100 cm <sup>2</sup> alpha radioactiv	ity, maximum over 100 cm²;				
	1,000 dpm per 100 cm² beta-gamma ra	dioactivity, removable; and				
	15,000 dpm per 100 cm <sup>2</sup> beta-gamma ra	adioactivity, maximum over 100 cm <sup>2</sup> ;				
	For surfaces contaminated with natural uraning thorium release limit, the sum of uranium and defined by the unity rule in Section 4.2 of the June 16, 1999), where uranium activity values	Im and thorium that cannot be cleaned to the thorium activity fractions may not exceed 1 (as Decommissioning Plan submitted by letter dated are as follows:				
	5,000 dpm per 100 cm <sup>2</sup> alpha radioactiv 1,000 dpm per 100 cm <sup>2</sup> alpha radioactiv 15,000 dpm per 100 cm <sup>2</sup> alpha radioacti 5,000 dpm per 100 cm <sup>2</sup> beta-gamma ra 1,000 dpm per 100 cm <sup>2</sup> beta-gamma ra 15,000 dpm per 100 cm <sup>2</sup> beta-gamma ra	ity, total; ity, removable; vity, maximum over 100 cm <sup>2</sup> ; dioactivity, total; dioactivity, removable; and adioactivity, maximum over 100 cm <sup>2</sup> ;				

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	Exposure rate from building surfaces:							
		5 μ <b>R</b> /	hr above	e backgro	und at 1 n	n from the s	surface	e averaged over area not to exceed 10 m <sup>2</sup>
28.	3. The licensee shall conduct a final survey and sampling program to ensure that residual contamination meets the unrestricted use criteria in this license. Buildings, equipment, and outdoor areas shall be surveyed in accordance with NUREG/CR-5849, "Manual for Conducting Radiological Surveys in Support of License Termination." a.) Soil and soil-like materials with elevated activities exceeding the unrestricted use criteria shall be							
		investig address	ated to a saverag	determine	complian entrations	ice with the over any 10	averaç 00 m² (	aging criteria of NUREG/CR-5849. These criteria (A) and use the $(100/A)^{\frac{1}{2}}$ elevated area method.
	b.)	Radioa contam remove	ctivity lev inated m d and tra	vels shall naterial th ansferred	not excee at exceed to a licen	d the avera s the avera sed, low-lev	iging ci ging cr vel radi	criteria in NUREG/CR-5849. Radioactively riteria defined in NUREG/CR-5849 shall be lioactive waste disposal facility.
Date:	Date: 07/26/2002 By: Larry W. Camper, Chief /RA/ Decommissioning Branch Division of Waste Management Office of Nuclear Materials Safety and Safeguards							

