

UNITED STATES
NUCLEAR REGULATORY COMMISSION

June 16, 2003 (2:52PM)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

In the Matter of)	
)	
FANSTEEL, INC.,)	Docket No. 40-7580
)	
(Request to Amend Source Materials)	
License No. SMB-911)	

STATE OF OKLAHOMA'S REQUEST FOR HEARING

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Dated: June 16, 2003

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The Attorney General of the State of Oklahoma, W.A. Drew Edmondson, by and through the undersigned, Sarah E. Penn, Assistant Attorney General, on behalf of the State of Oklahoma ("Oklahoma"), hereby submits its Request for Hearing pursuant to 10 C.F.R. § 2.1205(2)(i) on the matter of Fansteel, Inc.'s ("Fansteel") request to ostensibly amend¹ Source Material License No. SMB-911 at Fansteel's facility in Muskogee, Oklahoma (the "Fansteel Facility"), and decommissioning for the unrestricted use pursuant to 10 C.F.R. § 20.1402 (the "Proceeding"). Herein, Oklahoma requests an informal hearing to present evidence to show why the decommissioning of the Fansteel Facility proposed in the Decommissioning Plan (as hereinafter defined) is not in compliance with U.S. Nuclear Regulatory Commission ("NRC") statutes and regulations, and to detail the dangerous consequences that would result from any approval of the Decommissioning Plan and the

¹ According to the NRC letter dated April 28, 2003 (Exhibit 2), Fansteel has not made a request for license amendment should do so.

resulting amendment of the Source Material License No. SMB-911.

I. BACKGROUND

A. FACTUAL HISTORY

The Fansteel Facility is located on 110 acres of land located directly on the western bank of the Arkansas River (Webbers Falls Reservoir) in eastern Oklahoma near the City of Muskogee. Exhibit 1. It is bound on the west by State Highway 165 (a/k/a the Muskogee Turnpike) and on the south by U.S. Highway 62. Id. From 1958 until 1989, the Fansteel Facility was a rare metal extraction operation, producing tantalum and columbium metals from raw and beneficiated ores, and tin slag feedstock. EARTH SCIENCES CONSULTANTS, INC., REMEDIATION ASSESSMENT, FANSTEEL, INC. - MUSKOGEE, OKLAHOMA 1-2 (1993). The raw materials used for tantalum and columbium production contained uranium and thorium as naturally occurring trace constituents in such concentrations that Fansteel was required to obtain an NRC license. Id. The Fansteel Facility was licensed by NRC in 1967 to process ore concentrates and tin slags in the production of refined tantalum and niobium products. U.S. NUCLEAR REGULATORY COMMISSION, ENVIRONMENTAL ASSESSMENT-LICENSE AMENDMENT FOR MATERIAL LICENSE NO. SMB-911, 1-1 (December 1997). Processing operations at the Fansteel Facility substantially ceased in December of 1989. Id.

As a result of operations and various accidents and releases, the Fansteel Facility, including its soils, groundwater, and surface waters have been and continue to be contaminated by uranium, thorium, ammonia, arsenic, chromium, metals, cadmium,

ammonia, methyl isobutyl ketone (MIBK), and fluoride.² EARTH SCIENCES CONSULTANTS, INC., REMEDIATION ASSESSMENT, FANSTEEL, INC. - MUSKOGEE, OKLAHOMA 1-2 (1993).

B. PROCEDURAL HISTORY

On July 6, 1998, Fansteel submitted its proposed Decommissioning Plan for the Fansteel Facility, therein requesting an amendment to Source Materials License SMB-911 to decommission the Fansteel Facility (the "Proposed Decommissioning Plan"). Fansteel thereafter supplemented the Proposed Decommissioning Plan on December 4, 1998. In essence, the Proposed Decommissioning Plan incorporated a two-pronged approach toward decommissioning the Fansteel Facility. A majority of the Fansteel Facility would have been decommissioned for unrestricted release. EARTH SCIENCES CONSULTANTS, INC., DECOMMISSIONING PLAN, FANSTEEL, INC.-MUSKOGEE, OKLAHOMA 1-1, 2-1. Under the second prong, however, a permanent, on-site radioactive waste disposal cell for the disposal of decommissioning waste would be located at the Fansteel Facility, and the corresponding portion of the Fansteel Facility would be decommissioned for restricted release pursuant to 10 C.F.R. § 20.1403 (1999). Id.

By correspondence dated March 31, 1998, NRC notified Fansteel of its intention to

² Of the radioactive contaminants at the Fansteel Facility, thorium appears to have the lowest half-life, i.e., approximately 80,000 years. Meanwhile, the half-life of uranium is approximately 4,500,000,000 years. A generally accepted "rule of thumb" is that radioactive contaminants continue to pose a hazard to the public health, safety, and welfare, and the environment, for about ten (10) times the half-life of a given radioactive isotope. Thus, the radioactive contaminants at the Fansteel Facility will remain potentially hazardous to the public health, safety, and welfare, and the environment for billions of years. Neither the radium-226, the thorium-230, nor the uranium at the SFC Site will decay to unrestricted dose levels within any meaningful finite period of time.

review the Proposed Decommissioning Plan as two separate plans. Therein, NRC requested additional information from Fansteel relating to the unrestricted release portion of the Proposed Decommissioning Plan. As a result, Fansteel requested a meeting with NRC to discuss NRC's request for additional information. This meeting was held on April 13, 1999, between Fansteel and NRC, where it was decided that Fansteel would bifurcate its proposed Decommissioning Plan for the entire Fansteel Facility. One portion of the Decommissioning Plan would relate to the eastern portion of the Fansteel Facility, for which Fansteel sought decommissioning for unrestricted release pursuant to Site Decommissioning Management Program (SDMP). Fansteel was to submit a separate Decommissioning Plan for a smaller segment of the Fansteel Facility where Fansteel proposed to place a permanent disposal cell for the placement of radioactive decommissioning waste.

On August 13, 1999, Fansteel submitted the Restricted Release Decommissioning Plan for a portion of the Fansteel Facility. The Restricted Release Decommissioning Plan was a request to amend Source Material License SMB-911 to permit decommissioning a portion of the Fansteel Facility for restricted release pursuant to 10 C.F.R. § 20.1403 (1999), utilizing an on-site disposal cell for the permanent disposal of radioactive decommissioning waste, including long-lived radioactive material such as uranium and thorium. The disposal cell would have been located directly on native soils, without a liner or leachate collection system.

On September 14, 1999, NRC caused to be published in the Federal Register its Notice of Consideration of an Amendment Request for Fansteel Facility in Muskogee, Oklahoma and Opportunity for a Hearing (the "Notice"), relating to the Restricted Release

Decommissioning Plan. In response, on October 14, 1999, the Oklahoma Attorney General filed a Request for Hearing Pursuant to 10 C.F.R. § 2.1205. Fansteel filed its Response to the Request for Hearing on October 29, 1999, and NRC Staff filed its response on November 5, 1999.

In a Memorandum and Order, dated December 29, 1999, the Presiding Officer Granted the Oklahoma Attorney General's Request for Hearing based on the finding that Oklahoma had the requisite standing to participate as a party and that Oklahoma specified areas of concern germane to the Proceeding.

On January 13, 2000 Fansteel, Inc's appealed from the Presiding Officer's Decision to Grant a Hearing to Oklahoma. On February 2, 2000, NRC Staff responds to Fansteel's appealed to the Presiding Officer's decision, stating that Oklahoma was properly granted a hearing, as it successfully demonstrated both standing and injury-in-fact, as well as areas of concern germane to the proceeding. Oklahoma filed its Counter-Statement in Opposition to Fansteel Inc.'s Appeal on February 2, 2000.

On May 9, 2000 Fansteel, Inc. requested that the NRC staff discontinue review of Fansteel's Restricted Release Decommissioning Plan and on July 25, 2000, the NRC staff agreed to discontinue review of Docket No. 40-7580-MLA, ASLBP No. 00-772-01-MLA. Pursuant to the agreement of NRC staff to discontinue review of the Restricted Release Decommissioning Plan, Fansteel, Inc., Oklahoma and the NRC staff filed a joint motion to dismiss on January 2, 2001. On January 31, 2001, the Presiding Officer determined Fansteel Inc.'s appeal moot and accordingly, dismissed the case.

On January 14, 2003, Fansteel submitted a new Decommissioning Plan to support the plan to terminate the License No. SMB-911 for unrestricted use in accordance with 10 C.F.R. §20.1402. (Exhibit 1). On January 15, 2003 Fansteel, Inc., filed for Chapter 11 bankruptcy protection.

On April 28, 2003 NRC staff member Daniel M. Gillen, (Gillen) Chief, Decommissioning Branch, Division of Waste Management sent a letter to Gary Tessitore, (Tessitore) Chief Executive Officer, Fansteel, Inc. indicating the Results of Preliminary Review of Fansteel's Decommissioning Plan dated January 2003. (Exhibit 3). The letter stated that NRC staff had concluded that the Decommissioning Plan did not contain sufficient information to conduct a detailed review at this time, and further added that many sections, chapters were conceptual only and that the radiological status of the site was incomplete, nor did the Decommissioning Plan demonstrate how the estimated cost of remediation was reduced to less than half of the previous estimate of Fansteel's bankruptcy filing.

On May 8, 2003 Tessitore sent a letter to Gillen which stated it was a follow-up to the April 28, 2003 letter, the discussions and meeting regarding the bankruptcy involving the licensee, Fansteel. (Exhibit 4) This letter outlined, in one page, a four-phased approach (hereinafter described) to decommissioning the Fansteel Facility, Muskogee site by a new entity MRI (a wholly-owned subsidiary of Reorganized Fansteel). On May 9, 2003, Gillen responded to Tessitore's letter of May 8, 2003, (Exhibit 5) stating NRC staff had now reviewed Fansteel's one page submittal of May 8, 2003 (Exhibit 4) and concluded that

Fansteel had now submitted sufficient information to proceed with the detailed technical review of the Decommissioning Plan.

On May 15, 2003, Oklahoma received the May 9, 2003 letter indicating acceptance of the Fansteel Decommissioning Plan for Technical Review.(Exhibit 5)

II. REQUEST FOR HEARING

A. REQUIREMENTS FOR REQUESTS FOR HEARING

The provisions of 10 C.F.R. Part 2, Subpart L, titled Informal Hearing Procedures for Adjudications in Materials and Operator Licensing Proceedings, govern any adjudication initiated by a request for hearing in a proceeding for the amendment of a materials license subject to 10 C.F.R. Part 40. 10 C.F.R. § 2.1201(a)(1). This Request for Hearing relates to Fansteel's request to ostensibly amend its 10 C.F.R. Part 40 license for the decommissioning of the Fansteel Facility, and is therefore subject to Subpart L.

In Subpart L informal adjudications, a request for a hearing by a person other than the applicant must describe in detail (1) the interest of the requestor in the proceeding; (2) how those interests may be affected by the results of the proceeding; (3) the requestor's areas of concern about the licensing activity that is the subject matter of the proceeding; and (4) the circumstances establishing the timeliness of the hearing request. 10 C.F.R. § 2.1205(e)(1)-(4) (1999).

Additionally, the requestor must demonstrate standing, taking into consideration (1) the nature of the requestor's right under the Atomic Energy Act to be made a party to the

proceeding, (2) the nature and extent of the requestor's property, financial, or other interests in the proceeding; and (3) the possible effect of any order that may be entered in the proceeding upon the requestor's interest. 10 C.F.R. § 2.1205(h)(1)-(3) (1999). In determining whether a requestor's interest may be affected by a licensing proceeding, NRC looks to judicial concepts of standing. 10 C.F.R. § 2.1205(h) (1999). Thus, a requestor's injury must arguably fall within the zone of interests sought to be protected by the statutes governing the proceeding (e.g., the Atomic Energy Act, 42 U.S.C. § 2011 et seq.). Atlas Corporation (Moab, Utah Facility), LBP-97-9, 45 N.R.C. 414, 423 (1997). A request for hearing must allege injury-in-fact; the injury must be fairly traceable to the challenged action;³ and the injury must be redressable by the Commission. Id.; Lujan v. Defenders of Wildlife, 504 U.S. 555, 560-61 (1992).

While the person requesting a hearing has the burden of establishing standing, the Presiding Officer must construe the petition in favor of the person requesting the hearing. Georgia Institute of Technology (Georgia Tech Research Reactor), CLI-95-12, 42 N.R.C. 111, 115 (1995); Atlas Corporation (Moab, Utah Facility), LBP-97-9, 45 N.R.C. 414, 416 (1997). In order to demonstrate standing at this stage, Oklahoma does not have to prove the merits of its case. Warth v. Seldin, 422 U.S. 490, 500 (1975). Rather, in determining standing, it is incumbent upon the Presiding Officer to accept as true Oklahoma's material

³ The determination as to whether a Request for Hearing's asserted injury is fairly traceable to the proposed licensing action is not dependent on whether the cause of the injury flows directly from the licensing action, but whether the chain of causation is plausible. In the Matter of Northeast Nuclear Energy Company (Millstone Nuclear Power Station, Unit 3), LBP-98-22, 48 N.R.C. 149, 155 (1998).

allegations. In the Matter of Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 N.R.C. 281, 286 (1995).

Lastly, the Presiding Officer must determine that the areas of concern specified by the requestor are germane to the subject matter of the proceeding. 10 C.F.R. § 2.1205(h) (1999). An area of concern is germane if it is relevant to whether the license amendment should be denied or conditioned. In the Matter of Hydro Resources, Inc., LBP-98-9, 47 N.R.C. 261, 280 (1998). Areas of concern must fall “generally” within the range of matters that are properly subject to challenge in the proceeding, 54 Fed. Reg. 8269, 8272 (Feb. 28, 1989), and must be rational. Babcock and Wilcox Company (Pennsylvania Nuclear Services Operations, Parks Township, Pennsylvania), LBP-94-12, 39 N.R.C. 215, 217 (1994). The Subpart L direction to define areas of concern is only intended to ensure that the matters the requestor wishes to discuss in his or her written presentation are “generally” within the scope of the proceeding. Atlas Corporation (Moab, Utah Facility), LBP-97-9, 45 N.R.C. 414, 423 (1997).

B. OKLAHOMA’S RIGHT UNDER THE ATOMIC ENERGY ACT TO BE MADE A PARTY TO THE PROCEEDING

Pursuant to 42 U.S.C. § 2239(a)(1)(A), in any proceeding under Title 42, Chapter 23 of the United States Code for the granting, suspending, revoking, or amending of any license, NRC shall grant a hearing upon the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding. Oklahoma is a “person” under the Atomic Energy Act, the definition of which includes any State or any

political subdivision of, or any political entity within a State. 42 U.S.C. § 2014(s). As described in detail below, Oklahoma has numerous property, financial, and other interests that will be affected by the results of the Proceeding and the license amendment sought by Fansteel for the decommissioning of the Fansteel Facility as proposed in the Decommissioning Plan.

C. OKLAHOMA'S INTERESTS IN THE PROCEEDING

Oklahoma has significant property, financial, and other interests, such as the air, land, waters, environment, natural resources, wildlife, and citizens of Oklahoma, that will be affected by the results of the Proceeding. Oklahoma seeks to protect these interests through the above-captioned adjudication. Oklahoma has a right to participate in the Proceeding to protect all of its interests.

Oklahoma has a duty to protect the general welfare of its citizens, and therefore an interest in protecting the health, safety, and welfare of its citizens, many of whom live, work, travel, or recreate at or near the Fansteel Facility. As sovereign, Oklahoma is parens patriae, i.e., guardian and trustee for all of its citizens, and may act to prevent or repair harm to its quasi-sovereign interests. Hawaii v. Standard Oil Co. of California, 405 U.S. 251, 258 (1972). Further, Oklahoma has a quasi-sovereign interest in the physical and economic health and well-being of its citizens. Alfred L. Snapp & Son v. Puerto Rico, 458 U.S. 592, 600-607 (1982). Indeed, it is well-established that states may appear before NRC to protect the interests of their citizens and their air, lands, waters, wildlife, and other natural resources. In the Matter of International Uranium (USA) Corporation (Receipt of Material from

Tonawanda, New York), LBP-98-21, 48 N.R.C. 137, 145 (1998); In the Matter of Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 N.R.C. 142, 169 (1998).⁴ The Decommissioning Plan may injure the health, safety, and welfare of Oklahoma's citizens who rely upon waters in the Arkansas River for drinking, irrigation, and livestock uses, and will injure Oklahoma's natural resources, including its air, land, waters, and wildlife.

In addition to health, safety, and welfare, the interests protected by Oklahoma include the economic welfare of its citizens. This includes protecting the integrity of both groundwater and surface water, at, near, and downstream of the Fansteel Facility, used by residents for irrigation and consumption by livestock and wildlife. It also includes protecting the area's tax base and Oklahoma's tax revenues, which may be adversely affected by decreasing tourism and property values and loss of economic development caused by the Decommissioning Plan, and its contamination of the air, land, waters, wildlife, and natural resources of Oklahoma.

Oklahoma also has a proprietary interest in its air, lands, waters, wildlife, and other natural resources, which it has the right to protect. Oklahoma owns the waters in the

⁴ At issue in the Private Fuel Storage, L.L.C. matter was the licensure and construction of a facility to possess and store spent nuclear reactor fuel located on the reservation of the Skull Valley Band of the Goshute Indians, which is wholly within the borders of the State of Utah. In that case, the Presiding Officer found that the State of Utah had standing. "The State's asserted health, safety, and environmental interests relative to its citizens living, working, and traveling near the proposed facility and in connection with its property adjoining the reservation and the proposed transportation routes to the facility are sufficient to establish its standing in this proceeding." Private Fuel Storage, L.L.C., 47 N.R.C. at 169.

Arkansas River.⁵ OKLA. STAT. tit. 60, § 60, Oklahoma Water Resources Board v. Central Oklahoma Master Conservancy District, 464 P.2d 748 (Okla. 1968), which borders the eastern boundary of the Fansteel Facility, and which are both hydrologically and geologically connected to groundwater beneath the Fansteel Facility.⁶ Moreover, all wildlife in the State

⁵ The Arkansas River is an important natural resource, and is a significant recreational and economic resource. Oklahoma's Water Quality Standards designate the segment of the Arkansas River adjacent to the Fansteel Facility with the following beneficial uses: (1) emergency water supply; (2) fish and wildlife propagation - warm water aquatic community; (3) agriculture; (4) hydropower; (5) industrial and municipal process; (5) recreation - primary body contact; (6) navigation; and (7) aesthetics. OAC 785, Chapter 45, Appendix A. Oklahoma's Water Quality Standards designate the segment of the Arkansas River from Robert S. Kerr Lake to the Arkansas state line (downstream of the Fansteel Facility) with the following beneficial uses: (1) public and private water supply; (2) fish and wildlife propagation - warm water aquatic community; (3) agriculture; (4) hydropower; (5) industrial and municipal process; (5) recreation - primary body contact; (6) navigation; and (7) aesthetics. OAC 785, Chapter 45, Appendix A. The portion of the Arkansas River adjacent to the Fansteel Facility serves as vital water transportation route commonly known as the McClellan-Kerr Arkansas River Navigation System, which links inland ports such as the Port of Catoosa (near Tulsa, Oklahoma) and the Port of Muskogee (near the Fansteel Facility, Exhibit 1), with the Mississippi River. In 1997, over 12,000,000 tons of commodities such as farm products, petroleum products, iron and steel, etc., were shipped on the McClellan-Kerr Arkansas River Navigation System. The Arkansas River is hydrologically connected to groundwater beneath the Fansteel Facility. Exhibit 7 and 12.

⁶ As reflected in the Restricted Release Decommissioning Plan, and Fansteel's 1993 Remediation Assessment, groundwater beneath the Fansteel Facility is very shallow and hydrologically connected to the Arkansas River. EARTH SCIENCES CONSULTANTS, INC., DECOMMISSIONING PLAN - FANSTEEL, INC. - MUSKOGEE, OKLAHOMA 2-20 ; EARTH SCIENCES CONSULTANTS, INC., REMEDIATION ASSESSMENT, FANSTEEL, INC. - MUSKOGEE, OKLAHOMA 1-2 (1993). The Fansteel Facility is located over an alluvium and terrace deposit (namely the deposit associated with or adjacent to the Arkansas River), which constitutes a principal groundwater resource in Oklahoma. OKLAHOMA GEOLOGICAL SURVEY, MAPS SHOWING PRINCIPAL GROUND-WATER RESOURCES AND RECHARGE AREAS IN OKLAHOMA: SHEET 1 - UNCONSOLIDATED ALLUVIUM AND TERRACE DEPOSITS (1983); Recharge areas for groundwater resources in alluvial and terrace deposits are essentially the same as the deposits. Id. "Owing to the importance of alluvium and terrace deposits as recharge areas and as potential ground-water aquifers, special care must be taken in the utilization of lands underlain by these deposits. In particular, special attention must be exercised in storage or disposal of waste materials that contain leachable contaminants that could degrade the quality of water within or flowing across the alluvium or terrace deposits." Id. Groundwater under and in the immediate vicinity of the Fansteel Facility is considered vulnerable to contamination. OKLAHOMA WATER RESOURCES BOARD, TECHNICAL REPORT 99-1, STATEWIDE GROUNDWATER VULNERABILITY MAP OF OKLAHOMA (1999);

of Oklahoma is property of the State.⁷ OKLA. STAT. tit. 29, § 7-204. Oklahoma also operates and manages the Webbers Falls Unit of the McClellan-Kerr Wildlife Refuge, as well as the Cherokee Gruber Wildlife Refuge, each of which is located in close proximity to the Fansteel Facility, and leases certain agricultural rights and privileges in the of each wildlife refuge to third parties. Lastly, Oklahoma owns, operates, and maintains certain roads and thoroughfares in close proximity to the Fansteel Facility, namely State Highway 165, which runs adjacent to the Fansteel Facility. Oklahoma, and its political subdivisions, derive revenue from income taxes, sales taxes, and ad valorem (i.e., property) taxes, which revenues will be harmed in the event the NRC approves the Decommissioning Plan. As described in more detail below, the Decommissioning Plan will negatively impact tourism in the area by continuing to contaminate the soil and groundwater around the Fansteel Facility, which will reduce tax revenue to Oklahoma. Further, the Decommissioning Plan can not assure with any degree of confidence that the Fansteel Facility will be remediated to the appropriate levels required by 10 C.F.R. §20.1402 and will thereby render the Fansteel Facility of no market value, and lower market values of real property in the area surrounding the Fansteel Facility, thereby lowering ad valorem tax revenues for Oklahoma and its political subdivisions.

In addition to administering its own environmental programs, Oklahoma regulates environmental matters in the State through federal delegations from the U.S. Environmental

⁷ Oklahoma is empowered to preserve and protect wild animals and fish for the common enjoyment of its citizenry. State of Oklahoma v. Kerr-McGee Corp., 619 P.2d 858, 861 (Okla. 1980).

Protection Agency. For example, Oklahoma administers the National Pollution Discharge Elimination System under the Clean Water Act 33 U.S.C. §1342 (b), and exercises authority under the Resource Conservation and Recovery Act, 42 U.S.C. §6901 et seq. as well. Issues surrounding the Decommissioning Plan implicate and involve Oklahoma's state environmental regulatory jurisdiction pursuant to 27A OS§ 1-1-201(20) and its federal environmental regulatory jurisdiction pursuant to 33 U.S.C. §1342 (b) by failing to address the non-radiological contaminants in the groundwater.

Oklahoma is owner and trustee for natural resources in Oklahoma and is responsible for protecting the air, land, waters, environment, wildlife, and natural resources of Oklahoma. Oklahoma, therefore, has an interest in protecting the integrity of its wildlife and natural resources, including air, land, ground, and surface water, from continued contamination of the soil and groundwater and other adverse environmental consequences that will certainly be caused as a result of the Decommissioning Plan. In addition, Oklahoma is recognized as the trustee for natural resources, including surface and groundwater resources, for damage recovery actions under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9607(f).

Lastly, Oklahoma has an interest in the correct application and enforcement of the laws, rules, and regulations governing NRC-licensed facilities in Oklahoma. In Oklahoma, there are several facilities other than the Fansteel Facility under NRC's regulatory jurisdiction. Oklahoma is justifiably concerned that the misapplication of 10 C.F.R. § 20.1402, to the Fansteel Facility will serve as precedent for the misapplication of 10 C.F.R.

§ 20.1402 other facilities in Oklahoma attempting decommissioning for unrestricted release.

D. JUDICIAL STANDARDS OF STANDING

Oklahoma will suffer injury-in-fact if NRC amends Source Material License No. SMB-911 by approving the Decommissioning Plan. Under NRC precedent, Oklahoma is presumed to have standing in this matter. Notwithstanding this presumption, however, Oklahoma has standing because the Decommissioning Plan threatens to cause “distinct and palpable” injuries to Oklahoma, its citizens, and its air, land, waters, wildlife, and natural resources, Kelley v. Selin, 42 F.3d 1501, 1508 (6th cir. 1995), cert. denied, 115 S.Ct. 2611 (1995), quoting Warth v. Seldin, 422 U.S. 490, 501 (1975), all of which are within the zone of interests of the Atomic Energy Act. A causal connection exists between these injuries and the Decommissioning Plan and any approval thereof by the NRC. Each of these injuries is redressable in the above-captioned matter.

1. PRESUMPTION OF STANDING

To establish standing in proceedings involving materials licenses, petitioners must outline how the particular radiological or other cognizable impacts from the material involved in the licensing action at issue can reasonably be assumed to accrue to the petitioner. Atlas Corp. (Moab, Utah Facility), LBP-97-9, 45 N.R.C. 414, 426 (1997). In non-power reactor cases, a presumption of standing based upon geographic proximity may be applied where the proposed licensing action involves a significant source of radioactivity producing an obvious potential for offsite consequences. Sequoyah Fuels Corp. (Gore, Oklahoma Site), CLI-94-12, 40 N.R.C. 64, 75 n.22 (1994); In the Matter Georgia Institute

of Technology (Georgia Tech Research Reactor), CLI-95-12, 42 N.R.C. 111, 116 (1995); Armed Forces Radiobiology Research Institutes (Cobalt-60 Storage Facility), ALAB-682, 16 N.R.C. 150, 153-54 (1982).

The Decommissioning Plan does involve a significant source of continued radioactivity by failing to identify all radiological contaminants and properly remediating the contaminants on site, producing an obvious potential for offsite consequences as describe above, including direct effects upon Oklahoma's sovereign and proprietary interests. Thus, the presumption of standing in the above-captioned matter must be applied to Oklahoma due to its ownership of waters in the Arkansas River, OKLA. STAT. tit. 60, § 60, Oklahoma Water Resources Board v. Central Oklahoma Master Conservancy District, 464 P.2d 748 (Okla. 1968), which borders the Fansteel Facility. The presumption of standing in the above-captioned matter must be also applied to Oklahoma due to its operation and management of the Webbers Falls Unit of the McClellan-Kerr Wildlife Refuge, and the Cherokee Gruber Wildlife Refuge, each which is located in close proximity to the Fansteel Facility, Exhibit 4, and Oklahoma's ownership, operation, and management of certain roads and thoroughfares in close proximity to the Fansteel Facility, namely State Highway 165, which runs immediately adjacent to the Fansteel Facility.

2. APPROVAL OF THE DECOMMISSIONING PLAN WILL CAUSE OKLAHOMA INJURY-IN-FACT

Even without the benefit of the presumption of standing discussed above, Oklahoma has standing as it will suffer injury-in-fact in the event Source Material License No. SMB-

911 is amended by NRC's approval of the Decommissioning Plan.

First, the clean-up level proposed by Fansteel in the Decommissioning Plan will harm the citizens, air, land, waters, wildlife, and natural resources of Oklahoma, as well as the health, safety, and welfare of Oklahoma's citizens who rely on the Arkansas River, and the groundwater surrounding the Fansteel Facility for consumption, irrigation, or livestock uses. Although the purpose is to have Fansteel Facility designated for unrestricted release, the Decommissioning Plan does not guarantee that scenario. The DP is replete with inaccurate and insufficient data which precludes NRC staff from conducting an adequate review. Further, as described in the Decommissioning Plan, the industrial land use scenario is utilized yet the dose effects of alternate, reasonable land use scenarios were not evaluated and considering the location of the Fansteel Facility it is likely that sportsmen and outdoor enthusiasts will take fish, game or natural plants from the area for food use. In addition, wildlife will be unaware of the institutional controls imposed by the industrial use scenario, (a maximum exposure of 8 hours per day, with a maximum of 2 hours outside, no more than 5 days per week) and will become contaminated and thereby contaminate those who take them for food use. The Decommissioning Plan fails to properly remediate the Fansteel Facility and thereby causes injury-in-fact to Oklahoma by continuing to contaminate existing wildlife. EARTH SCIENCES CONSULTANTS, INC., DECOMMISSIONING PLAN, FANSTEEL, INC.-MUSKOGEE OKLAHOMA (2003).

Secondly, the inadequate budget proposed by Fansteel in the Decommissioning Plan will continue this contamination process by not providing any realistic amount of money for

remediation of soil and groundwater contamination. *Id.* at Appendix 15-1. Fansteel, originally estimated 57 million dollars would be necessary to remediate the site, yet the estimate is now 26.4 million and the site has incurred probable additional contamination and none of the original contamination has been remediated. The Decommissioning Plan wholly fails to adequately fund the remediation of the Fansteel Facility. As such, contamination to the soil and groundwater at the Fansteel Facility will continue to contaminate the property and contaminate waters owned by Oklahoma⁸ whose citizens rely upon the Arkansas Rivers for recreational purposes, and as a source of water for consumption, irrigation, and livestock.

Thirdly, the area surrounding the Fansteel Facility is graced with natural scenic beauty, including the picturesque Illinois and Arkansas Rivers. Nearby wildlife refuges, such as the Robert S. Kerr Unit of the McClellan-Kerr Wildlife Refuge, and the Cherokee Gruber Wildlife Refuge are a testament to the special character of the areas immediately surrounding the Fansteel Facility. The area surrounding the Fansteel Facility is an important tourism asset, and is frequented by Oklahoma citizens and other persons for numerous recreational purposes. Consequently, tourism in this area generates important tax revenues for Oklahoma and its political subdivisions, as well as revenues for Oklahoma's citizens that make their living from the tourism industry. The failure of the Decommissioning Plan to properly

⁸ It is important to note that a licensee's claim that "regulatory limits" are not exceeded by offsite radiological releases from a facility is not sufficient to show that a petitioner lacks standing. Atlas Corporation (Moab, Utah Facility), LBP-97-9, 45 N.R.C. 414, 425 (1997). Relative to a threshold standing determination, even minor radiological exposures resulting from a proposed licensee activity can be enough to create the requisite injury-in-fact. *Id.*; General Public Utilities Nuclear Corp. (Oyster Creek Nuclear Generating Station), LBP-96-23, 44 N.R.C. 143, 158 (1996).

remediate the Fansteel Facility to the appropriate standards, thereby allowing the continued placement of dangerous radioactive wastes in such close proximity to the Arkansas River, will lessen the recreational value of the Arkansas River. As a direct consequence, tourism in this area will necessarily decrease, and Oklahoma will thereby suffer injury-in-fact due to the corresponding decrease in revenues and lose an important and viable recreational resource.

3. ZONE OF INTERESTS

Oklahoma's interests in the Proceeding, as well as the injuries suffered by Oklahoma in the event Source Material License No. SMB-911 is amended through approval of the Decommissioning Plan, fall within the zone of interests protected by the Atomic Energy Act, which include, but are not necessarily limited to: (a) widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the public defense and security and with the health and safety of the public, Citizens for an Orderly Energy Policy, Inc. v. County of Suffolk, 604 F.Supp. 1084, 1093, (E.D.N.Y. 1985); (b) environmental and economic interests, id.; (c) protection of public health and safety, Drake v. Detroit Edison Co., 443 F.Supp. 833, 838-39 (W.D. Mich. 1978); Reyblatt v. U.S. Nuclear Regulatory Comm'n, 105 F.3d 715, 722 (D.C. Cir. 1997); and (d) public participation in the administrative process. Reyblatt v. U.S. Nuclear Regulatory

Comm'n, 105 F.3d 715, 722 (D.C. Cir. 1997).⁹

4. INJURIES FAIRLY TRACEABLE TO FANSTEEL'S (ASSUMED) REQUEST FOR LICENSE AMENDMENT

As previously discussed, the determination as to whether a Request for Hearing's asserted injury is fairly traceable to the proposed licensing action is not dependent on whether the cause of the injury flows directly from the licensing action, but whether the chain of causation is plausible. In the Matter of Northeast Nuclear Energy Company (Millstone Nuclear Power Station, Unit 3), LBP-98-22, 48 N.R.C. 149, 155 (1998). As applied, the injuries that will be suffered by Oklahoma are all fairly traceable to the Decommissioning Plan and any approval thereof by the NRC. Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992). All injuries-in-fact discussed above are directly related to the failure to identify and thereby the failure to remediate all contaminants at the Fansteel Facility as proposed by Fansteel in the Decommissioning Plan. The injuries that will be suffered by Oklahoma are not the result of the independent action of some third party not involved in the Proceeding.

Id.

5. REDRESSABILITY

⁹ Oklahoma interests and injuries relating to its ownership of waters, operation and management of the Webbers Falls Unit of the McClellan-Kerr Wildlife Refuge and the Cherokee Gruber Wildlife Refuge, ownership of State Highway 165, and representation of citizens living, working, traveling, and recreating in the environs of the Fansteel Facility are all within the zone of interests of the Atomic Energy Act. All injuries alleged by Oklahoma, even those financial or economic in nature, relate directly to the proposed presence/disposal of radioactive contaminants at the SFC Site, and are therefore within the zone of interests of the Atomic Energy Act.

Each of the injuries-in-fact that will be suffered by Oklahoma in the event that Source Material License No. SMB-911 is amended by NRC's approval of the Decommissioning Plan will be redressed in the Proceeding by a decision holding that the Decommissioning Plan is not in compliance with statutes rules and guidance. Lujan v. Defenders of Wildlife, 504 U.S. 555, 560-61 (1992). As described in detail in section II.F., below, Oklahoma's areas of concern directly relate to whether the Decommissioning Plan complies with The Atomic Energy Act 42 USC 2011 et seq., National Environmental Policy Act 4331 et seq., 10 C.F.R. Parts 5140, 10 C.F.R. § 40.42, 10 C.F.R. § 40.36 10 C.F.R Pt. 20 Subpart E, NUREG 1727, NUREG 1748 and NUREG 1757 and referenced Guidance, and therefore whether the amendment to Source Material License No. SMB-911 requested by Fansteel should be granted, denied, or conditioned. Each area of concern is material to the grant or denial of the amendment to Source Material License No. SMB-911, and makes a difference in the outcome of the Proceeding, thereby entitling Oklahoma to cognizable relief. Each area of concern is significant relative to NRC's authority to protect the public health and safety and the environment. In sum, each injury suffered by Oklahoma will be avoided if the Decommissioning Plan is rejected.

E. THE PROCEEDING'S EFFECT ON OKLAHOMA'S INTERESTS

As described in sections II.C. and II.D., above, and in section II.F. below, any order that may be entered in the Proceeding will have an effect upon the property, financial, and other interests of Oklahoma.

F. OKLAHOMA'S AREAS OF CONCERN

Where a request for hearing is filed by any person other than the applicant in connection with a materials licensing action under 10 C.F.R Part 2, Subpart L, the request for hearing must describe in detail the requestor's area of concern about the licensing activity that is the subject matter of the proceeding. 10 C.F.R. § 2.1205(e)(3) (1999). In ruling on any request for hearing, the Presiding Officer must determine whether the specified areas of concern are germane to the subject matter of the proceeding. 10 C.F.R. § 2.1205(h) (1999). An area of concern is germane if it is relevant to whether the license should be denied or conditioned. In the Matter of Hydro Resources, Inc., LBP-98-9, 47 N.R.C. 261, 280 (1998). Areas of concern must fall "generally" within the range of matters that are properly subject to challenge in the proceeding, 54 Fed. Reg. 8269, 8272 (Feb. 28, 1989), and must be rational. Babcock and Wilcox Company (Pennsylvania Nuclear Services Operations, Parks Township, Pennsylvania), LBP-94-12, 39 N.R.C. 215, 217 (1994).

At this early stage of the above-captioned matter, Oklahoma is not required to put forth an exhaustive exposition in support of the issues it wishes to litigate. Babcock and Wilcox (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-92-24, 36 N.R.C. 149, 154 (1992). A comprehensive statement of issues (resembling the merits of Oklahoma's contentions) must only be provided at a later date. 10 C.F.R. § 2.1233(c) (1999); Combustion Engineering, Inc. (Hematite Fuel Fabrication Facility, Special Nuclear Materials License No. SNM-33), LBP-89-23, 30 N.R.C. 140, 147 (1989). At this stage, Oklahoma's statement of areas of concern need only "identify" its areas of concern by providing

“minimal” information to ensure that the areas of concern are germane to the proceeding. Babcock and Wilcox Company (Pennsylvania Nuclear Services Operations, Parks Township, Pennsylvania, LBP-94-12, 39 N.R.C. 215, 217 (1994). Of course, identification of an area of concern must be specific enough to allow the Presiding Officer to ascertain whether or not the matter sought to be litigated is relevant to the subject matter of the Proceeding. Sequoyah Fuels Corporation, LBP-94-39, 40 N.R.C. 314, 316 (1994). It is against this legal background that the Presiding Officer must analyze and consider whether Oklahoma’s areas of concern are germane to the Proceeding.

Oklahoma’s areas of concern, set forth below, relate directly to Fansteel’s request for an amendment to Source Material License No. SMB-911 authorizing the decommissioning of the Fansteel Facility for unrestricted release, which is the licensing activity that is the subject matter of the Proceeding. It is Fansteel’s burden to demonstrate that decommissioning of the Fansteel Facility is appropriate, 62 Fed. Reg. 39058, 39069 (July 21, 1997), and for the reasons set forth below, Fansteel, through the Decommissioning Plan, has failed to meet this burden.

Oklahoma’s areas of concern therefore relate to the most fundamental issue in the Proceeding, namely whether the Decommissioning Plan meets the requirements of The Atomic Energy Act 42 USC 2011 et seq., National Environmental Policy Act 4331 et seq., 10 C.F.R. Parts 5140, 10 C.F.R. § 40.42, 10 C.F.R. § 40.36 10 C.F.R. Pt. 20 Subpart E, NUREG 1727, NUREG1748 and NUREG1757 and referenced Guidance thereby allowing the

Fansteel Facility to be decommissioned for restricted release under 10 C.F.R. § 20.1402. Each area of concern is rational and directly relevant to the amendment to Source Material License No. SMB-911 requested by Fansteel, and whether such amendment may be granted to Fansteel.

1. The Site Characterization is Incomplete and Fails to Address Current Conditions

The site characterization provided by Fansteel does not meet the requirements of 10C.F.R. 40.42(g). The Decommissioning Plan relies heavily on old data, much from 1993 and earlier. Significant changes have occurred since that time, including the construction of the french drain system, a substantial pilot project to reprocess waste that may have incurred additional releases and, a major hydrofluoric acid release that resulted in the hospitalization of two workers.

In addition to those changes, a tornado struck the site in 1999 damaging buildings Chemical "A", Chemical "C", R&D, Sintering, and Sodium Reduction as well as tearing the liners of Pond Nos. 3, 8 and 9 and ripping a stored soils cover. The damage to the Sodium Reduction Building allowed bagged Pond No. 5 material to fall out of the building and tear open. The bags were filled with moist, LLR material that contained an average of 21pCi/g uranium 235 and 6 pCi/g thorium-232 in 1993. Approximately 500 pounds of material were released to the ground surface allegedly within only a 10 foot diameter area. Without further analysis, it cannot be assumed that the release caused by this tornado was confined to a 10 foot diameter. To suggest that winds of 73-112 miles per hour would merely blow

radioactive material 10 feet, pushing automobiles off the road¹⁰ defies common sense.

The site characterization also does not account for the probable movement of soluble isotopes and their impact on the groundwater, possible groundwater changes caused by the placement of a mound of soil under an impermeable plastic tarp nor does it address the radiological contamination of the northwest property which the licensee originally believed to be uncontaminated. EARTH SCIENCES CONSULTANTS, IN., DECOMMISSIONING PLAN, FANSTEEL, INC.- MUSKOGEE, OKLAHOMA 2.1) Plus potential sources of elevated subsurface contamination, e.g. B-36 and MW-71S Id at 2.2) are not discussed nor are Ponds 1/1s-1N and 4. Id. at 2.3).

The 1993 characterization of buildings and equipment does not include effects of “reprocessing” activities that occurred through November 2001 nor does the 1993 characterization between the ponds and the process buildings include effects of “reprocessing” activities.

None of these changes were addressed and therefore render the site characterization ineffectual in determining the actual extent of contamination on the Fansteel Facility site. Although Section 15.1.1 states “No additional large-scale characterization...is planned...”, the NRC staff concluded that significant additional characterization is necessary. Therefore,

¹⁰ The Fujita Scale describes an F1 tornado as being able to peel surfaces off roofs; mobile homes pushed off foundations or overturned; moving autos, pushing autos off the roads, attached garages may be destroyed. <http://www.tornadoproject.com/fscale/fscale.htm>. June 16, 2003

because of the site characterization deficiency and its ramifications on the extent of necessary remediation the NRC can not evaluate whether the Decommissioning Plan will properly remediate the property for unrestricted release under 10 C.F.R. Part 40, Part 20 and NUREG 1757 and Oklahoma can not be assured of the safety of its natural resources for its citizens.

2. The Decommissioning Plan Fails to Adequately Address the Remediation of Groundwater for Radiological and Non-Radiological Contaminants.

In the Decommissioning Plan, Fansteel does not propose to remove contamination of radiation. The assurance of remediation of the groundwater is contained within the letter of May 8th which states “it is the intent of MRI not to seek termination of the licence until groundwater is satisfactorily remediated .” (Exhibit 4) This does not comply with Part 40 or Part 20 of the NRC rules and regulations. A plan must be submitted as part of the Decommissioning Plan that demonstrates compliance with the radiological criteria in Part 20 and cleanup groundwater to a level necessary to protect public health and safety from radiological dose and chemical toxicity. This is especially important considering the fact that the groundwater is hydrologically connected to the Arkansas River.

In addition to the radiological contamination, metals such as arsenic, cadmium, chromium and fluoride have been found in the groundwater monitoring wells that exceed EPA’s maximum allowed contaminate levels. The Decommissioning Plan does not address chemicals of concern, including ammonia, arsenic, cadmium, chromium, columbium-

tantalum, fluoride and MIBK, in the outfalls and surface waters. Plus, the Remediation Assessment identified materials in Ponds 2 & 3 which characteristically exhibit hazardous concentrations of chromium yet the Decommissioning Plan discusses excavating the Ponds by screening only for gamma particles to determine what material is to be sent off site.

The applicant has failed to address the remediation of the groundwater with the Oklahoma Department of Environmental Quality who pursuant to 27A O.S. §1342(b) has jurisdiction over the waters of the state. No commitment has been made to Oklahoma to assure that its waters will be remediated to allow for the consumption, irrigation or recreational uses which are reasonable uses in this area considering the natural resources and topography as well as agricultural efforts in this vicinity. EARTH SCIENCES CONSULTANTS, INC., DECOMMISSIONING PLAN, FANSTEEL INC., -MUSKOGEE, OKLAHOMA 3.1.

Fansteel also proposes to improperly extend the time period for the groundwater remediation in violation of Regulatory Issue Summary 2000-09, "Standard Review Plan for Licensee Requests to Extend the Time Period Established for Initiation of Decommissioning Activities." NRC: Washington, DC. June 26, 2000.

Oklahoma has experienced several periods of drought since statehood, some lasting several years. Major droughts in Oklahoma have occurred in 1929-1941, 1951-1957, 1961-1967 and 1975-1982. EARTH SCIENCES CONSULTANTS, IN., DECOMMISSIONING PLAN, FANSTEEL, INC. - MUSKOGEE, OKLAHOMA 3-20. Oklahoma can not afford to

have its groundwater contaminated by radiation and other unacceptable metals in light of the pattern of extreme droughts.

The proposed deed restriction in the Decommissioning Plan is not capable of containing migration of radioactive and non-radioactive contamination within the groundwater and preventing its ultimate destination of the Arkansas River which is a fatal flaw. The Decommissioning Plan does not provide sufficient justification for not considering ground water pathways. By failing to address the contaminated groundwater, the Decommissioning Plan will continue to injure the land, waters, wildlife, and natural resources of Oklahoma.

3. The Cost Estimates Are Not Sufficient Nor Supported by the Decommissioning Plan

The initial estimate to remediate the Fansteel Facility was 57 million dollars in 2002. (Exhibit 1) The revised estimate is less than half that amount, 26.4 million yet the site has not been improved and in fact additional activities have occurred which lead one to the conclusion that more not less contamination is on site. Plus the suspected additional contamination, there is the matter of the contamination that has remained unchanged. For example Table 1.1 lists the DCGL for the Th-232 chain as 10p/Ci/g which is the same as Condition 27 of the SMB 911 and is in the previous Decommissioning Plan submitted by Fansteel, yet despite the unchanged conditions the cost estimate is cut in half. Therefore conceptual Decommissioning Plan does not appear to support the calculated reduction in the cost of decommissioning.

Also section 15.1 states that cost estimates are based on the planned activities presented in the DP, however, as section 8 states this is a conceptual plan and the actual plan may differ therefore the cost estimates can hardly be accurate. Although Section 15.1.1 states “No additional large-scale characterization...is planned...”, the NRC staff concluded that significant additional characterization is necessary. A revised cost estimate to remediate the site should include the cost for additional characterization activities and the cost for remediation of all contamination, including groundwater and any additional contamination identified during the complete site characterization.

Finally, the terms and conditions of a confirmed plan of reorganization will cause a wholly-owned subsidiary (“MRI”) of Reorganized Fansteel to undertake a four-phased approach to decommissioning the Muskogee site by MRI. This is unacceptable. First, it assumes that the reorganization plan will be approved and at this time it has not yet even been submitted. Second, the estimates are not supported by the Decommissioning Plan and fansteel has not complied with the financial assurances of 10 C.F.R. §40.36.

4. The Industrial Use Scenario is Not Appropriate for this Site

Fansteel has failed to demonstrate that they will meet the criteria for unrestricted release in 10 C.F.R. 20.1402. Fansteel failed to consider all the sources, exposure routes and pathways in conducting its does modeling contrary to NUREG 1549. Fansteel has tried to avoid demonstrating compliance by utilizing the industrial use scenario. This scenario is not appropriate for the Fansteel site and fails to demonstrate that radiation dose from soil,

groundwater, lagoons and surface water will meet the standards in 10 C.F.R. part 20 and will be as low as reasonably achievable.

The industrial use scenario is not appropriate for the Fansteel Facility because it condemns the site to an industrial use only. Although the Port of Muskogee may acquire portions of the property for industrial use, it is not inconceivable and is in fact reasonable to expect some recreational use of the property considering the location and topography of the site. This is a recreational area, across the river is a boat launching areas which is being discussed as use a marina and in the area there are numerous recreational lakes, including Fort Gibson and Lake Eufala. The area around the Fansteel Facility is home to a wide variety of flora, fauna and aquatic life. EARTH SCIENCES CONSULTANTS, INC. DECOMMISSIONING PLAN, FANSTEEL INC. -MUSKOGEE, OKLAHOMA3-21, 3-22. It is therefore not possible to preclude the potential use by sportsmen and outdoor enthusiasts who will take fish, game or natural plants from the area for food.

Agricultural use of the land occurs outside the City of Muskogee and is an important component of the economy of area. Soybeans, hay, corn and sorghum are the primary crops grown. Muskogee County is among the state's top six soybean-producing counties. Dairy cattle, beef cattle, hogs and chickens are all raised in the area around the site. Most farms in the area are classified as livestock farms and dairy farms. Id.

Fansteel must therefore provide additional information regarding the dose effects of the alternate reasonable land use scenarios because the industrial land use scenario is not

appropriate for the Fansteel Facility.

5. Insufficient and Inconsistent Data Does Not Allow for a Proper Evaluation of the Decommissioning Plan

A Preliminary Review of Fansteel's Decommissioning Plan dated January 2003 was performed and submitted in the form of a letter dated April 28, 2003 to Mr. Gary L. Tessitore (Tessitore), Chief Executive Officer, Fansteel Inc. from Mr. David Gillen (Gillen) Chief, Decommissioning Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards. (Exhibit 3). The letter states "the staff has concluded that the DP does not contain sufficient information to conduct a detailed review at this time. In particular, Section 8 of the DP states it is a *conceptual plan and specific decommissioning activities may differ from what is presented.* (Italics Added).

The following is the insufficient and inconsistent data that does not comply with 10 C.F.R. §40.42 and does not contain the detail required by NUREG 1757 and NUREG 1727:

In Chapter 3:

- 3.1 The values for the hydrological parameters are stated but there is no mention of the numerical techniques used to obtain those parameters. According to NRC staff, a discussion of the numerical techniques should be provided.
- 3.2 The potential for the vertical migration of radiological material to the bedrock aquifer

is not discussed. According to NRC staff, Fansteel should provide the additional information or explain why it is not necessary.

- 3.3 There is not sufficient data to support the potentiometric contours of the bedrock aquifer in Figure 3-8. A detailed description of vertical migration should be provided in order to demonstrate that migration of isotopes of interest are not reasonably expected to reach this aquifer.
- 3.4 The values for distribution coefficients are given in the RESRAD output provided in Chapter 5, however no basis is given for the chosen values. These parameters may be important if the groundwater pathway is applicable.
- 4.3 There are insufficient data surrounding the ponds to characterize possible leakage. These areas should be characterized in order to properly assess the necessary amount of remediation to the site.
- 4.4 There are no data for process equipment or piping, either above or below grade. These areas and components should be characterized in order to properly assess the necessary amount of remediation to the site.
- 4.5 There are no data under the building floors or around the footings. This is important and should be characterized because contamination was found in these types of areas in other parts of the facility, e.g. NW property and must be done in order to properly assess the necessary amount of remediation to the site.
- 4.6 The depth of penetration of contamination into structures is not defined. The depth

of penetration affects the method of removal and total radioactive waste volume therefore must be determined in order to properly assess the necessary amount of remediation to the site.

- 4.7 The historic site assessment does not support the classification of areas, especially those identified as non impacted. Additional information, including characterization, as more completely described in proposition 1, should be provided to support the classification.
- 4.8 In section 2.1 of the November 1993 report states that "radiological analyses were secured from [three] depth intervals...0'-6" [at the saturation] zone and an intermediate interval..." However, **less than 10 percent** of the data in the DP have samples at more than one depth in a location, and **only one** has all three analyses. The distribution of contamination at depth throughout the site must be well defined in order to properly assess the necessary amount of remediation to the site.
- 4.9 The number of borings is not consistent in the report. Section 3.5.2 states there are 96 borings and section 4.3.2 states there are 92 while Table 4.1 has only 81 locations. The exact number of sampling locations should be ascertained and provided if a proper assessment of the necessary remediation is to be performed.
- 4.10 The basis for converting cpm to p/Ci/g is not presented and should be if a proper analysis is to be conducted.
- 4.11 Data from only two ground water sampling events is presented. This is insufficient

to determine the extent of the contamination. Also, in the 1993 Remediation Assessment Report other contaminants such as chromium, arsenic and fluoride are shown to be present yet the Decommissioning Plan only addresses radiological contamination. Remediation for these contaminants needs to be addressed as well.

- 4.12 The elevation and location data for bore holes reported on Figure 4-11 is different from the data on Drawing OMF-GRNDS-011(11/25/02). One discrepancy is that the reported low points on the OMF are higher than the surface topography shown, e.g. Pond 3 low point is listed as 531.3', and the topographic isopleth for the berm is 530'. Additionally, the elevations of the wells are approximately six feet higher on the OMF than that reported in the bore logs. Also, the locations of wells and topography is somewhat different between the two drawings. For example, on Figure 4-11, MW71S is on the 534' isopleth, and south of the south berm of Pond 3,; on the OMF, the well is inside (less than) the 530' isopleth and north of the Pond 3 south berm. This raises questions on what values were used to calculate waste volume. These differences must be resolved and a consistent data set provided in order for an accurate assessment of the Decommissioning Plan.

Chapter 8

- 8.2 The remediation techniques for the several types of contamination are not specified: "Specific remediation techniques **will be developed**... (§8.1.2, 8.2.2, etc.) indicating that the Decommissioning Plan is incomplete and more information must be

- submitted in order to conduct a proper review.
- 8.3 The depth of excavation in Ponds 2 and 3 as stated in §8.3.2.2 is different from that shown in Figure 8.1 by about 10 feet. This difference affects the volume calculations and thereby the amount of contamination to be remediated.
 - 8.4 It is not clear whether the soils volumes include that under Ponds 2 and 3, or just adjacent to them. Again, this must be determined because it affects the total amount of property to be remediated.
 - 8.5 The method and configuration for gamma scanning material to determine compliance with the release criteria are not specified. This should be defined in order to make a proper assessment of the site contamination.
 - 8.6 The information submitted in Chapter 8 and Chapter 4 are not sufficient to verify the volume that will be disposed of at other licensed sites. This lack of information affects the ability to assess the extent of contamination as well as the costs of the Decommissioning Plan.

Chapter 9

- 9.1 Section 7.2 states that remediation work may not be performed by contractors, but §9.2.4 list tasks and activities to be performed by contractors. This just one more example of the inconsistencies contained within the Decommissioning Plan.
- 9.2 If indeed there are to be contractors, then information on specific contractors or work division between Fansteel and its contractors should be provided.

Chapter 10

- 10.1 Section 10.0 states “The current site RHASP... **will be revised...**to include decommissioning activities...” Again, information that is to be revised is inaccurate and insufficient to begin with and should not be utilized to make an accurate assessment of the extent of the site’s contamination.
- 10.2 The selection and use of surrogates should be discussed in detail rather than in the Decommissioning Plan’s cursory fashion.
- 10.3 Section 10.7 states ‘ The instrumentation program **will include..**’ Yet again the information provided is incomplete and does not allow for a proper review of the Decommissioning Plan.

Chapter 11

- 11.1 Section 11.0 states “the current site EMP **...will be revised to include** decommissioning activities...” If information provided is to be revised, it can not be accurate as submitted.
- 11.2 There is no basis presented for using “recent sampling events”, that are not defined, as a baseline for effluent releases. The justifications for the baselines should be included in the information provided. Also, any changes to a re-issued NPDES permit should be identified in order to determine the proper levels of contaminants.

Chapter 12

- 12..1 The radioactive “...solid waste management plan **will include** the following....” This

plan has not yet been developed because of the status of the site characterization, presumably its incomplete status, and both must be done in order to properly review the Decommissioning Plan.

Chapter 13

- 13.1 This chapter states the existing plan **will be revised** to address a variety of Quality Assurance issues related to decommissioning. These revisions should be made and a revised plan submitted because without Quality Assurance in the sampling methods the entire remediation effort must be called into question.

Chapter 14

- 14.1 Another reference to the incomplete site characterization surveys and its affect on the classification of areas on the site is made by the NRC staff.
- 14.2 Section 14.4 states “ an FSSP **will be prepared ...**” The balance of Chapter 14 reiterates the MARSSIM theory, but provided no specific information. According to NRC staff, a comprehensive, site-specific plan should be submitted.

Chapter 15

- 15.3 The equation in Section 15.1.2(P15-3) does not properly compute the volume of the truncated pyramid used to approximate the ponds. This of course, does not allow for an accurate review of the DP.
- 15.4 There is no information on the shape of Ponds 1,2 or 4. The drawings(e.g.) Figure 4.1) show an irregular shape for Pond 2. There is no contingency in the volume

calculations to account for the potential changes in the estimated volume of Pond 2. Page 15-4 states the slope for ponds 5-9 is between 1.5-2. The correct volumes of all ponds, with contingencies should be provided.

15.5 Fansteel must demonstrate that IUC is authorized to accept the proposed shipments.

As this voluminous list demonstrates, the Decommissioning Plan is fraught with inconsistent, inaccurate and insufficient data. It is inconceivable that a site of this size can be accurately assessed using such gross misinformation. If the Decommissioning Plan is approved then Oklahoma's land, water, wildlife and citizenry are jeopardized because there will be no certainty that the standards of 10C.F.R. §20. Part 40 NUREG 1727 and NUREG 1757 will be met.

6. Key Components of the Decommissioning Plan Have Not Been Submitted

In addition to the insufficient and inconsistent data, several key components of the Decommissioning Plan have not be submitted and must be in order to comply with the rules for license termination with the rules and guidance.

The first and most basic requirement is a request for a license amendment for SMB 9-11. Fansteel must submit a request in order for its decommissioning plan to be reviewed. To Oklahoma's knowledge, at this time no request has been made and according to NRC's letter of April 28, 2003, a request should be submitted.(Exhibit 3)

The second is there is no request for an alternate decommissioning schedule under

10C.F.R. part 40 and in accordance with Regulatory Issue Summary 2000-09. The transmittal letter accompanying the Decommissioning Plan states an application for an alternative schedule for decommissioning the Muskogee facility will be filed in accordance with 10 CFR §40.42(h)(2)(i) by February 17, 2003. (Exhibit 2)

It is inappropriate for the NRC staff to agree to not conduct an Environmental Impact Statement as understood by Fansteel in its May 8th letter (Exhibit 4) when in NRC's April 28th letter (Exhibit 3) NRC stated that an EIS will likely be necessary. The NRC should follow the process in 10 C.F.R. Pt.51 and the Guidance in NUREG 1748 to conduct an EA and, based on that, determine whether an EIS is required. The not just an Environmental Assessment must be submitted because there is radiological groundwater contamination at the site. In order to properly understand the extent of contamination information should be provided commensurate with that level of environmental analysis.

An integral part of the license termination rule requirements is the submission of an ALARA analyses. 10 C.F.R. pt 20. Yet section 7.0 of the Decommissioning Plan states that "...Fansteel **will perform** remediation ALARA analyses indicating that the analyses has still not been performed. According to NRC staff, this is a necessary part of the submittal because it affects the remediation criteria and activities. Finally, Fansteel is required to demonstrate that the radiation does is As Low As Reasonably Achievable yet completely failed to do so in the DP.

Finally, Section 8.0 of the Decommissioning Plan states that the DP is "A conceptual

engineering plan...detailed plans...may differ..."; this is NOT a final DP. (Emphasis added). The NRC staff stated in its letter dated April 28, 2003 to the CEO of Fansteel that a final plan must be submitted before it can be reviewed and approved by the staff. Oklahoma can only echo this statement. Unless a final plan is submitted, it is impossible to review the Decommissioning Plan and understand the full impact on our state and our interests. However, despite the incomplete submittal and the long list of deficiencies, Fansteel's Decommissioning Plan was accepted for a detailed technical review within ten (10) days of the detailed, seven (7) page rejection letter. Exhibit MAY(letter) In order to accomplish this task, Fansteel apparently met with NRC staff and pursuant to those discussions and a six paragraph letter (exhibit), all issues were seemingly resolved.

TIMELINESS OF REQUEST FOR HEARING

Where a request for hearing is filed by any person other than the applicant in connection with a materials licensing action under 10 C.F.R Part 2, Subpart L, the request for hearing must describe in detail the circumstances establishing that the request for hearing is timely. 10 C.F.R. § 2.1205(e)(4) (1999). Oklahoma received a letter dated May 9, 2003 on May 15, 2003(Exhibit 5) indicating that the NRC had accepted Fansteel's Decommissioning Plan for detailed technical review.(Exhibit 5). Pursuant to 10 C.F.R. § 2.1205(a), (d)(1) (1999), any person whose interest may be affected by the Proceeding for the amendment of Source Materials License SMB-911 may file a request for a hearing within thirty (30) days of receiving actual notice of an agency action. Pursuant to 10 C.F.R. §2. 710,

thirty (30) days has been calculated as June 16, 2003. As set forth in the Certificate of Service below, this Request for Hearing was deposited in the United States mail, on June 16, 2003, and was therefore filed on June 16, 2003. Pursuant to 10 C.F.R. § 2.1203(b)(2) (1999), filing by mail is complete as of the time of deposit in the mail. In addition to the mailed copies, a copy has been sent by facsimile transmission to the office of the secretary and by e-mail to hearingdocket@nrc.gov to all the parties as set forth in the certificate of service requested.

G. DESIGNATION FOR PURPOSES OF SERVICE

Pursuant to 10 C.F.R. § 2.1203(c) (1999), service of all pleadings, documents, and correspondence relating to the Proceeding may be served upon Sarah E. Penn, Assistant Attorney General, Office of the Attorney General, 4545 North Lincoln Boulevard, Suite 260, Oklahoma City, Oklahoma, 73105.

III. CONCLUSION

The Attorney General of Oklahoma, W.A. Drew Edmondson, by and through the undersigned, Sarah E. Penn, Assistant Attorney General, on behalf of the State of Oklahoma, hereby prays that its Request for Hearing be granted, and that the State of Oklahoma be granted a hearing relating to Fansteel's request for an amendment to Source Materials License No. SMB-911 authorizing the decommissioning of the Fansteel Facility for unrestricted release pursuant to 10 C.F.R. § 20.1402 (1999). NRC staff has assured

Oklahoma that it will publish a Notice in the Federal Register providing an opportunity for Public Hearing, Oklahoma specifically reserves the right to amend this Request for Hearing based on any information contained in any such notice.

Respectfully Submitted,

**W.A. DREW EDMONDSON
ATTORNEY GENERAL OF OKLAHOMA**

A handwritten signature in black ink, appearing to read "Sarah E. Penn", written over a horizontal line.

**SARAH E. PENN
ASSISTANT ATTORNEY GENERAL
ENVIRONMENTAL PROTECTION UNIT
4545 N. Lincoln Blvd., Suite 260
Oklahoma City, Oklahoma 73105
Telephone: (405) 522-4413
Telefax: (405) 528-1867**

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

In the matter of)	
)	
FANSTEEL, INC.,)	Docket No. 040-07580
)	
(Muskogee, Oklahoma Facility))	June 16, 2003

NOTICE OF APPEARANCE

Notice is hereby given that the undersigned attorney enters an appearance in the above-captioned matter as a representative of the State of Oklahoma. In accordance with 10 C.F.R. § 2.713(b) (1999), the following information is provided:

Name:	Sarah E. Penn
Address:	Office of Attorney General of Oklahoma 4545 North Lincoln Boulevard, Suite 260 Oklahoma City, Oklahoma 73105-3498
Telephone Number:	(405) 521-4274
Fax Number:	(405) 528-1867
E-mail Address:	<u>sarah_penn@oag.state.ok.us</u>

Admissions:

State of Oklahoma
Northern District of Oklahoma

Name of Party:

State of Oklahoma

Respectfully Submitted,

**OFFICE OF THE OKLAHOMA
ATTORNEY GENERAL**



SARAH E. PENN
ASSISTANT ATTORNEY GENERAL
ENVIRONMENTAL PROTECTION UNIT
4545 North Lincoln Boulevard, Suite 260
Oklahoma City, Oklahoma 73105-3498
Telephone: (405) 521-4274
Telefax: (405) 528-1867

Dated: June 16, 2003

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on the 16th day of June, 2003, a true and correct copy of the foregoing was transmitted by facsimile to the Office of the Secretary, Rulemakings and Adjudications Staff and via e-mail and certified U.S. mail, return receipt requested, to the following:

Gary L. Tessitore
Chief Executive Officer
Fansteel, Inc.
Number One Tantalum Place
North Chicago, Illinois 60064
e-mail: gary-tess@msn.com
VIA Certified U.S. Mail
No. 7002 2030 0000 8192 6727

A. Fred Dohmann
General Manager
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#Ten Tantalum Place
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No. 7002 2030 0000 8192 6734

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Sarah E. Penn

Gary L. Tessitore
Chairman, President and
Chief Executive Officer

Fansteel

June 25, 2002

Mr. Larry Camper
Chief, Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: Decommissioning Cost Estimate
Docket No. 40-7580
License SMB-911
TAC No. L31592
Fansteel Inc., Muskogee, Oklahoma

Dear Mr. Camper:

In accordance with License Condition 21, as revised by Amendment 9 to License SMB-911, this submittal presents Fansteel Corporation's ("Fansteel" or "Company") decommissioning cost estimate for its Muskogee site. This letter also responds to your April 8, 2002 letter which requested responses to certain issues discussed therein. Your letter stated that Fansteel's response could be included in this submittal.

As background, in conjunction with Earth Sciences Consultants, Inc, Fansteel's environmental consultant, the Company has begun the work necessary for the submission to the U.S. Nuclear Regulatory Commission ("NRC" or "Commission") during the fall of 2002 of a proposed Decommissioning Plan ("DP") and is examining a number of modified approaches to optimize the decommissioning of the Muskogee site. The proposed DP will include a revised cost estimate for decommissioning based on the revised plan. As the Company is still in the early stages of development of this plan, no updated decommissioning cost estimates associated with such modified approaches are currently available. Consequently, for purposes of fulfilling License Condition 21, Fansteel is utilizing an estimate of \$57 million for the total cost for remediating the Muskogee site which is consistent with previous public disclosures by Fansteel. This filing represents cost estimates prepared by the Company prior to its Chapter 11 bankruptcy filing and was utilized in preparation of its March 21, 2002 financial filing with the United States District Court for the District of Delaware ("District Court") which was served on the NRC.

The decommissioning cost estimate supersedes previously submitted estimates. The costs were estimated using methodology and assumptions not comparable to previous estimates

and, as a result, the estimates cannot be compared directly, *e.g.*, the new estimate assumes offsite disposal of contaminated soils versus use of an onsite containment cell. The new estimate includes costs for offsite disposal of the contents of the WIP and CAF ponds, a different system and assumptions for groundwater treatment, and assumes the use of an outside contractor and personnel for decommissioning. As part of the preparation of the DP, the estimate contained herein will be further refined. A number of the entries are believed to be conservatively estimated, but have not been reduced to more realistic values to maintain consistency with the filings in the bankruptcy court.

As I have stressed previously to the NRC, Fansteel continues to fulfill its responsibilities as a licensee at the Muskogee site, expending the necessary funds and taking all actions necessary to assure the ongoing maintenance of public health and safety. With regard to the totality of the claim for decommissioning the site, consistent with my affidavit in support of the First Day Motions which were filed with the District Court on January 15, 2002, and the Company's Schedule S and Statement of Affairs filed with the District Court on March 21, 2002, the Company has no ability, under the provisions of the U.S. Bankruptcy Code, to provide additional financial assurance at this time. Further, notwithstanding the debtor-in-possession financing facility recently approved by the District Court, the Company has no present financial ability to provide additional financial assurance in the manner contemplated by the Commission's regulations. Fansteel understands that under the Commission's regulations, namely 10 C.F.R. § 40.36(d), that financial assurance for decommissioning is required by one or more of the methods enumerated in subsection (e); however, as set forth above and as previously discussed with you, Fansteel is not currently in a position to provide the financial assurance required by the applicable regulation.

Your letter of April 8 set forth the view that in such circumstances the Company must submit "a request for an exemption from Section 40.36 pursuant to 10 CFR 40.14." Given the status of the bankruptcy proceeding, we are not presently in a position to be able to inform you of the extent of additional financial assurance which we may be able to provide, but believe that by December, 2002, we will be in a better position to address this matter. As you may know, as part of the District Court's approval of the debtor-in-possession financing facility, the Official Creditors' Committee requested that, as soon as possible, the Company (subject to District Court approval) retain an independent turnaround consultant to assist the Company in the development of a business plan to (a) maximize the value of the assets of the Company and its affiliated debtors, and (b) provide the foundation for the development of a plan of reorganization which will propose the treatment of all claims (including, without limitation, those of the NRC related to the proposed DP) and equity interests in the Company and its affiliated debtors.

For the foregoing reasons, we ask that you postpone consideration of the financial assurance in accordance with 10 C.F.R. § 40.36 until December 20, 2002. If it is your view, as articulated in your April 8, 2002 letter, that given the foregoing facts, relief in the form of an exemption would be required to accommodate our suggested schedule, you may consider this

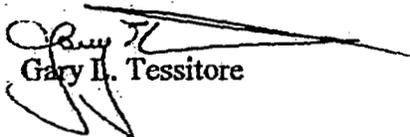
letter to constitute such a request in that it demonstrates that such relief is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest.

With regard to the first and second bullets in the April 8, 2002 letter, the Company is aware that its license expires on September 30, 2002, and a renewal application would have to be filed not less than 30 days before the expiration date, *i.e.*, prior to August 31, 2002, for the license to stay in force during the NRC's review of the application in accordance with 10 C.F.R. § 40.42(a)(1). Because the Company continues to examine business prospects for the Muskogee site, Fansteel has not decided to permanently cease principal activities. See 10 C.F.R. § 40.42(d)(2). Rather, the Company intends to seek timely renewal of its license.

The third bullet regarding meeting NRC financial assurance requirements has been addressed above.

As we have stated in several meetings with representatives of the NRC and the Department of Justice, it is the desire of Fansteel to reach a consensual resolution regarding an appropriate revised DP and a decommissioning funding plan that will be satisfactory to both the NRC and to Fansteel and its other unsecured creditors in order for Fansteel to successfully emerge from Chapter 11 proceedings.

Sincerely,



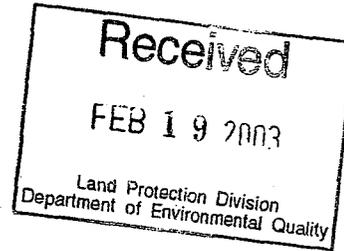
Gary L. Tessitore

cc: James C. Shepherd, U.S. Nuclear Regulatory Commission
Maria E. Schwartz, Esq., U.S. Nuclear Regulatory Commission
Alan Tenenbaum, Esq., U.S. Department of Justice
Richard Gladstein, Esq., U.S. Department of Justice
Brooke D. Poole, Winston & Strawn
Jeffrey S. Sabin, Schulte Roth & Zabel
R. Michael McEntee, Fansteel Inc.
A. Fred Dohmann, Fansteel Inc.
E. Jonathan Jackson, Fansteel Inc.

Gary L. Tessitore
Chairman, President and
Chief Executive Officer
Number One Tantalum Place
North Chicago, IL 60064

Fansteel

January 14, 2003



Attention: Document Control Room
Mr. James Shepherd, Project Manager
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852-2738

Re: Fansteel, Inc., License No. SMB-911, Docket No. 40-7580

Dear Mr. Shepherd:

Enclosed for filing in accordance with 10 C.F.R. §§ 40.42(d) and (g) is the Decommissioning Plan for Fansteel, Inc.'s ("Fansteel") Muskogee site. The Decommissioning Plan contains the technical information necessary to support the plan to terminate the Muskogee license for unrestricted use in accordance with 10 C.F.R. § 20.1402. Also included is a decommissioning cost estimate for the project.

Fansteel is currently negotiating with the U.S. Department of Justice, as representative of the U.S. Nuclear Regulatory Commission ("NRC"), and with other creditors as to their claims in the ongoing bankruptcy proceeding. The amount and type of financial assurance to be provided in connection with the Decommissioning Plan will be set forth in a plan of reorganization that Fansteel currently intends to file with the Bankruptcy Court on or before February 17, 2003. The plan of reorganization, among other things, will set forth with particularity the terms and conditions of the financial instruments proposed to be given in satisfaction of Fansteel's financial assurance requirements under the Decommissioning Plan. See Section 15.3 of the Decommissioning Plan.

A supplement filing with the NRC is expected to be made regarding decommissioning funding assurance by February 17, 2003. Inasmuch as it is anticipated that the pace of cleanup will likely be controlled by the available cash flow, as determined by the negotiations with the NRC, it is expected that an application for an alternative schedule for completion of decommissioning for the Muskogee facility will be filed in accordance with 10 C.F.R. § 40.42(h)(2)(i). Similarly, we plan to submit a request for exemption from the requirements of 10 C.F.R. § 40.36(d) and (e) to support the agreed upon alternative form of financial assurance mechanism. These filings are also expected to be made by February 17,

AN ATTACHMENT TO THIS LETTER CONTAINS MATERIAL TO BE
WITHHELD FROM PUBLIC DISCLOSURE PURSUANT TO 10 C.F.R. § 2.790

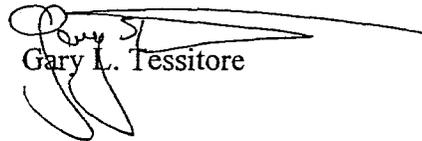
Fansteel

2003, which is well within the 12-month period for submission of a decommissioning plan required by 10 C.F.R. § 40.42(d).

A table entitled "Fansteel-Muskogee, Closure Cost Estimate, January 2003," which is attached hereto, shows site closure expenses broken down by year. This table, which may be relevant to the NRC's consideration of financial assurance, contains privileged and confidential commercial and financial information. In accordance with 10 C.F.R. § 2.790, as discussed in the attached affidavit, I request that this table be withheld from public disclosure. This table is being submitted to assure a complete record, although it includes costs beyond those required to satisfy NRC decommissioning funding assurance requirements, *e.g.*, certain overhead costs and costs to satisfy requirements of other government agencies.

We look forward to discussing these matters with you after completion of your initial review.

Sincerely,


Gary L. Tessitore

Enclosure

cc: Mr. Fred Dohmann

Mr. Larry W. Camper (w/out Decommissioning Plan enclosure)

AN ATTACHMENT TO THIS LETTER CONTAINS MATERIAL TO BE
WITHHELD FROM PUBLIC DISCLOSURE PURSUANT TO 10 C.F.R. § 2.790



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

APR 26 2003

Mr. Gary L. Tessitore
Chief Executive Officer
Fansteel Inc.
Number One Tantalum Place
North Chicago, Illinois 60064

SUBJECT: RESULTS OF PRELIMINARY REVIEW OF FANSTEEL'S
DECOMMISSIONING PLAN DATED JANUARY 2003

Dear Mr. Tessitore:

The staff has completed its initial review of the decommissioning plan (DP) submitted by Fansteel on January 16, 2003. The staff does not object to the proposed approach to decommissioning the Muskogee site. However, the staff concluded that the DP does not contain sufficient information to conduct a detailed review at this time. In particular, Section 8 of the DP states it is a conceptual plan and specific decommissioning activities may differ from what is presented. Several other chapters begin with statements indicating that the plans will be developed. In addition, the radiological status of the site is incomplete and out of date. Because of these limitations on the radiological information presented, the staff cannot verify the ability of the plan to effect remediation of all contamination at the site. Furthermore, considering that the remediation criterion for thorium, the controlling isotope, is the same as in the previous plan -- 10 pCi/g -- Fansteel has not demonstrated how the estimated cost of remediation has been reduced to less than half the previous Fansteel estimate that was used in its bankruptcy filing.

Within thirty (30) days of the date of this letter, Fansteel should submit a schedule by which it intends to respond to this letter. Note that Fansteel has several options in its response: it may obtain and provide the additional information identified herein and resubmit the DP; it may notify NRC it is implementing the existing DP; or it may develop a different approach to decommissioning the site that meets the requirements of 10 CFR Part 20 Subpart E. The schedule Fansteel submits will be incorporated as a condition in the license.

More details of the NRC review are in the attachment. If Fansteel elects to amend this DP, and resubmit it for review, it should address all of these comments. It should place particular emphasis on the following in the revised submittal:

- A complete, current characterization of the site, including:
 - saturated and unsaturated zones throughout the site
 - areas under all buildings, and
 - all areas with surface or subsurface piping

- A revised area classification (impacted or non-impacted) supported by the updated characterization
- The specific approach to be used in decommissioning each area
- All "plans" identified as "... will be ...[written]" (DQO, QA/QC, Decommissioning Funding Plan, Contractor Work Plan, etc.)
- A detailed schedule of decommissioning activities, including additional remediation necessary to define the current extent of radiological contamination
- A revised cost estimate to remediate the site, including:
 - cost for additional characterization activities
 - cost for remediation of all contamination, including any identified during characterization
 - a comparison of the cost estimate with the funds set aside for decommissioning
 - a detailed cost/expenditure plan to support the decommissioning activities

Fansteel, and perhaps its contractors, should meet with the staff to discuss the review in depth, and to better understand the staff's needs for additional information before finalizing its response.

If you have any questions on this matter, please contact Mr. James Shepherd, of my staff, at (301) 415 6712 or jcs2@nrc.gov.

Sincerely,



Daniel M. Gillen, Chief
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards

Docket No.: 40-7580

License: SMB-911

Enclosures: 1. Comments on Fansteel Decommissioning Plan of January 2003

cc: Walter Beckham
Pamela Bishop
Mike Broderick
George Brozowski
James Curtiss, Esq.
A. F. Dohmann
Phillip Fielder
Richard Gladstein, Esq.
Timothy Hartsfield
Sarah Penn, Esq
Quang Pham
Kevin Sampson
Susan Webster

COMMENTS ON FANSTEEL DECOMMISSIONING PLAN OF JANUARY 2003

The following are general comments on the decommissioning plan. Because the plan is conceptual, there is not sufficient information in many sections for a detailed review. These comments are not comprehensive, and additional questions may arise from the more detailed information that should be submitted.

1. Chapter 1

- 1.1 There is no request for license amendment. A request should be submitted.
- 1.2 There is no request for an alternate decommissioning schedule; the letter of transmittal states it would be submitted by February 17. A request for the alternate schedule should be submitted.
- 1.3 The description of the site is the condition in 1993, not the present; contamination includes soluble isotopes that are expected to move in a decade, and some operations took place that are not discussed. The current condition should be described.
- 1.4 Table 1.1 lists the DCGL for the Th-232 chain as 10 pCi/g. This is the same as Condition 27 of SMB-911, and the previous decommissioning plan. This conceptual DP does not appear to support the calculated reduction in cost of decommissioning by more than half.

2. Chapter 2

- 2.1 There is no discussion of activities that caused contamination that was identified during surveys of the northwest property that the licensee originally stated was not contaminated. This discussion should be included.
- 2.2 Only a Pond 3 spill is addressed. Potential sources of elevated subsurface contamination, e.g. B-36 and MW-71S, are not discussed. All other process releases to the environment should be discussed.
- 2.3 Ponds 1/1S-1N and 4 are not discussed. Activities and residual contamination, or verification of complete remediation and current status, should be included.

Attachment

3. Chapter 3

- 3.1 Values for hydrologic parameters are stated, but there is no mention of numerical techniques to obtain them. A discussion of techniques should be provided.
- 3.2 Potential for vertical migration of radiological material to the bedrock aquifer is not discussed. Fansteel should provide the additional information or explain why it is not necessary.
- 3.3 There is not sufficient data to support the potentiometric contours of the bedrock aquifer in Figure 3-8. A detailed description of vertical migration should be provided. If it demonstrates that migration of isotopes of interest are not reasonably expected to reach this aquifer, additional characterization may not be necessary.
- 3.4 Values for distribution coefficients are given in the RESRAD output provided in Ch. 5; however no basis is given for the chosen values. These parameters may be important if the ground water pathway is applicable.

4. Chapter 4

- 4.1 1993 characterization of buildings and equipment does not include effects of "reprocessing" activities that occurred through November 2001. Fansteel should update the characterization to reflect this activity.
- 4.2 1993 characterization data between the ponds and the process buildings does not include effects of "reprocessing" activities that occurred through November 2001. Fansteel should update the characterization to reflect this activity.
- 4.3 There is insufficient data surrounding the ponds to characterize possible leakage. These areas should be characterized.
- 4.4 There are no data for process equipment or piping, either above or below grade. These areas and components should be characterized.
- 4.5 There are no data under building floors or around footings (contamination was found in these types of areas in other parts of the facility, e.g. NW property). These areas and components should be characterized.

- 4.6 Depth of penetration of contamination into structures is not defined; this affects the method of removal and total radioactive waste volume. Depth of penetration of contamination should be defined.
- 4.7 The historic site assessment does not support the classification of areas, especially those identified as non-impacted. Additional information, including characterization, should be provided to support the classification.
- 4.8 Section 2.1 of the November 1993 report states that "... radiological analyses were secured from [three] depth intervals] ... 0'-6", [at the saturation] zone, and an intermediate interval" In fact, less than ten percent of the data in the DP have samples at more than one depth in a location, and only one has all three analyses. The distribution of contamination at depth throughout the site should be well defined.
- 4.9 The number of borings is not consistent in the report: §3.5.2 states there are 96, §4.3.2 states 92, and Table 4.1 has 81 unique locations. Fansteel should provide a consistent statement of sampling locations.
- 4.10 The basis for converting cpm to pCi/g in soil scanning is not presented. Fansteel should provide this analysis.
- 4.11 Data from only two ground water sampling events is presented. Fansteel should provide all available data.
- 4.12 The elevation and location data for bore holes reported on Figure 4-11 is different from the data on Drawing OMF-GRNDS-011 (11/25/02). One example is that the reported low points on the OMF are higher than the surface topography shown, e.g. Pond 3 low point is listed as 531.3', and the topographic isopleth for the berm is 530'. Additionally, the elevations of the wells are approximately six feet higher on the OMF than that reported in the bore logs. Also, the locations of wells and topography is somewhat different between the two drawings. For example, on Figure 4-11, MW-71S is on the 534' isopleth, and south of the south berm of Pond 3; on the OMF, the well is inside (less than) the 530' isopleth and north of the Pond 3 south berm. This raises questions on what values were used to calculate waste volumes. These differences should be resolved and a consistent data set provided.

5. **Chapter 5**

- 5.1 The DP does not provide sufficient justification for not considering ground water pathways. All identifiable past, present and reasonable future uses of ground water should be identified, along with any impediments and impetuses to its use. Any information about commitments to Oklahoma Department of Environmental Quality related to ground water remediation should also be provided.
- 5.2 Additional support for the industrial land use scenario should be provided. The dose effects of alternate, reasonable land use scenarios should also be evaluated.

6. **Chapter 6**

- 6.1 Chapter 6 states that "Fansteel **will prepare** an ..[ER]"; no such information is included in this submittal. Because there is radiological ground water contamination at the site, and this contamination is subject to NRC regulatory control, NRC believes that an EIS may be necessary. Fansteel should provide information commensurate with that level of environmental analysis.

7. **Chapter 7**

- 7.1 Section 7.0 states "... Fansteel **will perform** remediation ALARA analyses" This is a necessary part of the submittal because it affects the remediation criteria and activities, and is an integral of the license termination rule requirements.

8. **Chapter 8**

- 8.1 Section 8.0 states that the DP is "A conceptual engineering plan detailed plans ... may differ"; this is not a final DP. A final plan must be submitted before it can be reviewed and approved by the staff.
- 8.2 Remediation techniques for the several types of contamination are not specified: "Specific remediation techniques **will be developed** " (§8.1.2, 8.2.2, etc.).

- 8.3 Depth of excavation in Ponds 2 and 3 as stated in §8.3.2.2 is different from that shown in Figure 8-1 by about 10 feet; this affects the volume calculations. These differences should be resolved.
- 8.4 It is not clear whether the soils volumes include that under Ponds 2 and 3, or just adjacent to them. This should be clarified.
- 8.5 The method and configuration for gamma scanning material to determine compliance with release criteria is not specified. These should be defined.
- 8.6 The information in this chapter and in Chapter 4 is not sufficient to verify the volume that may require disposal at a licensed facility, such as Envirocare; the volume can go to other facilities such as WCS; and what can remain on site. The additional information should be submitted.

9. Chapter 9

- 9.1 Section 7.2 states that remediation work may not be performed by contractors, but §9.2.4 lists task and activities to be performed by contractors. These statements are not consistent. The differences should be resolved.
- 9.2 There is no information on specific contractors or work division between Fansteel and its contractors. This information should be provided.

10. Chapter 10

- 10.1 Section 10.0 states "The current site RHASP ... **will be revised** ... to include decommissioning activities" These activities should be identified and the RHASP revised as necessary.
- 10.2 Selection and use of surrogates should be discussed in detail.
- 10.3 Section 10.7 states "The instrumentation program **will include**" The plan should be developed fully, and include details of MDCs, especially under less than ideal conditions, such as in wet areas.

11. **Chapter 11**

- 11.1 Section 11.0 states "The current site EMP ... **will be revised** to include decommissioning activities" These activities and revised plan should be submitted.
- 11.2 There is no basis presented for using "recent sampling events", that are not defined, as a baseline for effluent releases. Justification for baselines should be provided. Also, as of 15 Mar, 2003, the NPDES permit had not been reissued; any changes to limits in the revised permit should be identified.

12. **Chapter 12**

- 12.1 The radioactive "... solid waste management plan **will include** the following" This plan has not yet been developed, in large measure because of the status of site characterization. Both should be completed and submitted.

13. **Chapter 13**

- 13.1 This chapter states the existing plan **will be revised** to address a variety of QA issues related to decommissioning. These revisions should be made and the revised plan submitted.

14. **Chapter 14**

- 14.1 As expressed above, characterization surveys are not comprehensive. This can also affect area classification. Additional characterization to justify site conditions should be provided.
- 14.2 Section 14.4 states "An FSSP **will be prepared**" The balance of Chapter 14 reiterates the MARSSIM theory, but provides no site specific information. A comprehensive, site-specific plan should be submitted.

15. Chapter 15

- 15.1 Section 15.1 states cost estimates are based on the planned activities presented in this plan. However Section 8 states this is a conceptual plan and the actual plan may differ. Cost estimates should be updated to reflected current site conditions and actual remediation plans.
- 15.2 Section 15.1.1 states "No additional large-scale characterization ... is planned" The staff has concluded that significant additional characterization is necessary; see comments on Chapter 4, above. The additional information should be collected, and estimates should be updated to reflect these costs.
- 15.3 The equation in Section 15.1.2 (P 15-3) does not properly compute the volume of the truncated pyramid used to approximate the ponds. One acceptable form to calculate the volume is: $V = \int_0^h (l_0 + 6h)(w_0 + 6h)dh$.
- 15.4 There is no information on the shape of Ponds 1, 2, or 4. The drawings (e.g. Figure 4.1) show an irregular shape for Pond 2; page 15-4 states the slope for ponds 5-9 is between 1.5 and 2. There is no contingency in the volume calculations to account for potential changes in the estimated volume of Pond 2. The correct volumes of all ponds, with contingencies, should be provided.
- 15.5 Fansteel must demonstrate IUC is authorized to accept the proposed shipments.
- 15.6 There is not an acceptable funding plan for this DP. The DP cannot be accepted until there is an acceptable funding mechanism. If the proposed funding does not meet NRC regulations, requests for exemption with justification must be included.

Gary L. Tessitore
Chairman, President and
Chief Executive Officer

Fansteel

May 8, 2003

Daniel M. Gillen, Chief
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: Docket No. 40-7580
License SMB-911
Fansteel Inc.
Muskogee, Oklahoma Site

Dear Mr. Gillen:

This letter is submitted as a follow-up to your letter of April 28, 2003, our further discussions, and a meeting held in the context of settlement regarding the ongoing bankruptcy case involving the licensee, Fansteel Inc. ("Fansteel"). We thank you for your responsiveness to the issues and concerns we raised regarding various Nuclear Regulatory Commission ("NRC") positions. This letter documents our understanding of the resolution of the issues resulting from our interactions.

Upon emergence from Chapter 11, and in accordance with the terms and conditions of a confirmed plan of reorganization (the "Plan", Reorganized Fansteel ("RF") will cause one of its wholly-owned subsidiaries ("MRI") to undertake a four-phased approach to decommissioning the Muskogee site by MRI. The first phase will involve the remediation and offsite disposal of the residue of WIP in Ponds 2 and 3, which contains the highest concentration of radioactive material. At NRC's request, Fansteel is prepared to take steps to accelerate the schedule for this phase, with actual remediation to begin by September 1, 2004 and to be completed by March 31, 2006, taking into account considerations of preparation, scheduling, cost and weather. It is Fansteel's intent to advance this schedule to the extent practicable.

The second phase will involve remediation and offsite disposal of the CAF material. Fansteel also intends to advance the schedule for Phase 2 CAF remediation with the goal of MRI beginning the work by January 1, 2007 and completing the work by April 30, 2011.

The third phase will involve completion of the remediation by MRI, including buildings, equipment, and soils. It is during this phase that any additional needed

characterization will be accomplished. The planned activities during the third phase will also be advanced with the objective of completing all presently contemplated radiological remediation in 2011.

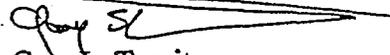
The fourth and final phase will involve groundwater monitoring and remediation. Unrestricted release of the site will occur before or after the fourth phase. It is the intent of MRI not to seek termination of the license (or alternate arrangements acceptable to the NRC) until groundwater is satisfactorily remediated. On this basis, we understand that the NRC will only be required to prepare an Environmental Assessment in connection with approval of Fansteel's Decommissioning Plan.

If necessary to timely meet the scheduled expenditure of costs, MRI will be permitted to "borrow" up to \$2 million from the Standby Trust.

Based upon our discussions to date and the above-described approach to remediation of the Muskogee Site, it is Fansteel's understanding that the Decommissioning Plan submitted on January 14, 2003 is acceptable for review by the NRC. NRC will agree to complete its review and issue a decision on the acceptability of all phases of the Decommissioning Plan by October 31, 2003. Any required licensing actions, including the transfer of the license to MRI and any required exemptions, will be effected by an NRC Order also to be issued by October 31, 2003.

We would appreciate your prompt acknowledgment of this letter, and your agreement that it contains the essential understandings of an agreed-upon approach to the remediation of the Muskogee Site, addressing the issues identified in your letter of April 28, 2003.

Sincerely,


Gary L. Tessitore



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

May 9, 2003

04007580

Mr. Gary L. Tessitore
Chief Executive Officer
Fansteel Inc.
Number One Tantalum Place
North Chicago, Illinois 60064

SUBJECT: RESULTS OF PRELIMINARY REVIEW OF FANSTEEL'S DECOMMISSIONING
PLAN DATED JANUARY 2003

Dear Mr. Tessitore:

The staff has reviewed the information provided by Fansteel in its letter of May 8, 2003, supplementing the January 2003 decommissioning plan (DP) for the Muskogee, Oklahoma, facility. The staff has determined that the phased remediation of the site, the accelerated schedule, and the changes to decommissioning proposed by Fansteel are acceptable. The staff has also concluded that Fansteel submitted sufficient information to proceed with the detailed technical review of the DP. During the review additional questions may arise to which Fansteel should be prepared to respond in a timely manner.

Because of its bankruptcy proceeding, Fansteel has requested that the Nuclear Regulatory Commission (NRC) complete its review of all phases of the DP by October 31, 2003. The staff plans to write the safety evaluation report and environmental assessment, and make a recommendation regarding approval by that date. However, as you are aware, any recommended licensing action requires a 30 day period for public comment and opportunity for hearing before it is made final. This schedule presumes complete and timely responses by Fansteel to any requests for additional information. To that end, Fansteel should update its decommissioning schedule and funding plan to reflect the phased approach within ten days of the date of this letter. NRC approval of the DP will be subject to confirmation of a plan of reorganization acceptable to government officials with authority. Any request for transfer of license is a separate licensing action that must follow confirmation of an acceptable plan of reorganization.

If you have any questions on this letter, you may contact Mr. James Shepherd, of my staff, at 301-415-6712 or jcs2@nrc.gov.

Sincerely,

Claudia M. Craig for

Daniel M. Gillen, Chief
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards

Docket No.: 40-7580
License: SMB-911

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Pamela Bishop
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