

PLEDGE AGREEMENT

PLEDGE AND SECURITY AGREEMENT dated as of December 18, 2003, made by FMRI, INC., a Delaware corporation (the "Pledgor"), in favor of the UNITED STATES NUCLEAR REGULATORY COMMISSION (the "NRC").

WITNESSETH:

WHEREAS, Fansteel Inc., a Delaware corporation ("Reorganized Fansteel"), is the successor-in-interest to Fansteel Inc., a debtor and debtor-in-possession and co-proponent of the Joint Reorganization Plan of Fansteel Inc. and Subsidiaries dated November 18, 2003 in Chapter 11 Case No. 02-10109(JJF)(Jointly Administered) (such plan, as amended, restated or otherwise modified from time to time, being hereinafter referred to as the "Reorganization Plan");

WHEREAS, pursuant to the Reorganization Plan, the Pledgor, a wholly-owned subsidiary of Reorganized Fansteel, has been organized as a special purpose vehicle as the successor-in-interest to Fansteel Inc., a Delaware corporation as it existed prior to the Effective Date (as defined in the Reorganization Plan) of the Reorganization Plan ("Old Fansteel"), in respect of all licenses (including, but not limited to, the NRC License SMB-911 (Docket No. 40-7580)), permits, equipment, real property, improvements and the L/C Cash Reserve (as defined in the Reorganization Plan) in order to fulfill obligations under the licenses and the Amended Decommissioning Plan;

WHEREAS, pursuant to the Reorganization Plan, Reorganized Fansteel has the obligation to fund the operations and activities of FMRI, in furtherance of such obligation Reorganized Fansteel has executed the FMRI Primary Note dated the date hereof in favor of FMRI in the principal amount of \$30,600,000.00 (the "FMRI Primary Note") and the FMRI Secondary Note dated the date hereof in favor of FMRI in the principal amount of \$4,200,000.00 (the "FMRI Secondary Note") and the FMRI Contingent Note in favor of FMRI in an amount to be determined in the manner set forth in the Reorganization Plan and on such terms as may be mutually agreed to by the parties (the "FMRI Contingent Note", together with the FMRI Primary Note and the FMRI Secondary Note, the "Notes"), such FMRI Contingent Note to be held in escrow by the NRC pursuant to the escrow letter, dated the date hereof (the "Escrow Letter"), by and between Reorganized Fansteel, FMRI and the NRC;

WHEREAS, pursuant to the Reorganization Plan, the Amended Decommissioning Plan (as defined below), and NRC License SMB-911 issued to FMRI, FMRI has the obligation to use the funds obtained from the FMRI Primary Note, the FMRI Secondary Note, and the FMRI Contingent Note exclusively for purposes of decommissioning the Muskogee Site;

WHEREAS, pursuant to the Reorganization Plan, the NRC shall be a third-party beneficiary of the FMRI Primary Note, the FMRI Secondary Note and, if any, the FMRI Contingent Note and the Pledgor shall grant the NRC a perfected first priority lien on and in the FMRI Primary Note and its proceeds, on and in the FMRI Secondary Note and its proceeds and,

if any, on and in the Contingent Note and its proceeds (it being the parties' understanding that the proceeds of the aforementioned Notes include, without limitations, any proceeds derived from Asset Sale Proceeds (as defined in the applicable Note) and Net Insurance Proceeds (as defined in the applicable Note));

NOW, THEREFORE, in consideration of the premises and the agreements herein and in order to satisfy the terms of the Reorganization Plan, the Pledgor agrees with the NRC as follows:

SECTION 1. Definitions. All capitalized terms used in this Agreement which are defined in the Reorganization Plan, the FMRI Primary Note, the FMRI Secondary Note or the FMRI Contingent Note, as applicable, or in Article 8 or Article 9 of the Uniform Commercial Code (the "Code") currently in effect in the State of Illinois and which are not otherwise defined herein shall have the same meanings herein as set forth therein.

Definitions:

"Amended Decommissioning Plan" means Fansteel's decommissioning plan for the Muskogee Facility, dated January 14, 2003, as supplemented by letters dated May 8, 2003 and May 9, 2003, and resubmitted by Old Fansteel for review by the NRC on July 24, 2003, as the same may be further amended, modified, or supplemented.

"Decommissioning Trust" means all cash on deposit with the Bank of Waukegan, Waukegan, Illinois, pursuant to the Standby Trust Agreement dated February 3, 1994, as amended, by and between Fansteel and the Bank of Waukegan as trustee under Trust No. 2740.

SECTION 2. Pledge and Grant of Security Interest. The Pledgor hereby pledges and assigns to the NRC, and grants to the NRC a continuing security interest in, all of the Pledgor's right, title and interest in and to the following (the "Pledged Interests"):

(a) the FMRI Primary Note evidencing Reorganized Fansteel's obligation to the Pledgor (the "Primary Pledged Debt");

(b) the FMRI Secondary Note evidencing Reorganized Fansteel's obligation to the Pledgor (the "Secondary Pledged Debt");

(c) the FMRI Contingent Note, if any, evidencing Reorganized Fansteel's obligation to the Pledgor (the "Contingent Pledged Debt", together with the Primary Pledged Debt and the Secondary Pledge Debt, the "Pledged Debt");

(d) all cash, instruments, investment property and other property from time to time received, receivable or otherwise distributed in exchange for any or all of the Pledged Debt; and

(e) all proceeds (including proceeds of proceeds) of any and all of the foregoing;

in each case, whether now owned or hereafter acquired by the Pledgor and howsoever its interest therein may arise or appear (whether by ownership, security interest, claim or otherwise).

SECTION 3. Security for Obligations. The security interest created hereby in the Pledged Interests constitutes continuing collateral security for all of the following obligations, whether now existing or hereafter incurred (the "Obligations"):

(a) the prompt payment by Reorganized Fansteel, as and when due and payable (by scheduled maturity, required prepayment, acceleration, demand or otherwise), of all amounts from time to time owing by it in respect of the FMRI Primary Note, including, without limitation, principal of the FMRI Primary Note, all fees, commissions, expense reimbursements, indemnifications and all other amounts due or to become due under the FMRI Primary Note;

(b) the prompt payment by Reorganized Fansteel, as and when due and payable (by scheduled maturity, required prepayment, acceleration, demand or otherwise), of all amounts from time to time owing by it in respect of the FMRI Secondary Note, including, without limitation, principal of the FMRI Secondary Note, all fees, commissions, expense reimbursements, indemnifications and all other amounts due or to become due under the FMRI Secondary Note;

(c) the prompt payment by Reorganized Fansteel, as and when due and payable (by scheduled maturity, required prepayment, acceleration, demand or otherwise), of all amounts from time to time owing by it in respect of the FMRI Contingent Note, if any, including, without limitation, principal of the FMRI Contingent Note, all fees, commissions, expense reimbursements, indemnifications and all other amounts due or to become due under the FMRI Contingent Note; and

(d) the due performance and observance by FMRI of all of its other obligations from time to time existing in respect of the Reorganization Plan.

SECTION 4. Delivery of the Pledged Collateral. The FMRI Primary Note, the FMRI Secondary Note and the FMRI Contingent Note (along with its related Escrow Letter) shall be delivered to the NRC on or prior to the day of execution and delivery of this Agreement. Pledgor further agrees that if within 90 days of Pledgor's receipt of written notice from the NRC to the Pledgor that the NRC, in its discretion, has deemed either of the Pledgor or Reorganized Fansteel to be in material breach of its obligations under the Amended Decommissioning Plan, the Reorganization Plan, or the FMRI Promissory Notes, the Pledgor and/or Fansteel, as the case may be, has not cured such material breach, then Pledgor shall deliver to a custodian or nominee designated in writing by the NRC (the "NRC Designee"), which NRC Designee may include the Decommissioning Trust, all cash, instruments, investment property or other payments that it has received and has in its possession and that it may receive from time to time under the FMRI Primary Note, the FMRI Secondary Note, the FMRI Contingent Note, Net Insurance Proceeds, and Reorganized Fansteel Asset Sale Proceeds. All such instruments shall be held on behalf of the NRC pursuant hereto and shall be delivered to NRC Designee in suitable form for transfer by delivery or shall be accompanied by duly executed assignment in blank, in a form substantially similar to the Form of Assignment and Acceptance attached hereto as Exhibit A. If any Pledged

Interest consists of uncertified securities, unless the immediately following sentence is applicable thereto, the Pledgor shall cause the NRC Designee to become the registered holder thereof, or cause each issuer of such securities to agree that it will comply with the instructions originated by the NRC with respect to such securities without further consent by the Pledgor. If any Pledged Interest consists of security entitlements, the Pledgor shall transfer such security entitlements to the NRC Designee or cause the applicable securities intermediary to agree that it will comply with entitlement orders by the NRC without further consent by the Pledgor.

SECTION 5. Representations and Warranties. The Pledgor represents and warrants as follows:

(a) The Pledgor is and will be at all times the legal and beneficial owner of the Pledged Interests free and clear of any lien except for the security interest created by this Agreement.

(b) This Agreement creates a valid security interest in favor of the NRC in the Pledged Interests, as security for the Obligations. The NRC's having possession of the FMRI Primary Note, the FMRI Secondary Note and, if any, the FMRI Contingent Note results in the perfection of such security interest. Such security interest is, or in the case of any Pledged Interest in which the Pledgor obtains rights after the date hereof, will be, a perfected, first priority security interest. All action necessary or desirable to perfect and protect such security interest has been duly taken, except for the NRC's having possession of such instruments constituting Pledged Interests after the date hereof.

SECTION 6. Covenants as to the Pledged Interests. So long as any Obligations shall remain outstanding and the FMRI Primary Note, the FMRI Secondary Note and, if any, the Contingent Note shall not have been paid in full, the Pledgor will, unless the NRC shall otherwise consent in writing:

(a) keep adequate records concerning the Pledged Interests;

(b) at its expense, promptly deliver to the NRC a copy of each notice or other communication received by it in respect of the Pledged Interests;

(c) at its expense, defend the NRC's right, title and security interest in and to the Pledged Interests against the claims of any Person;

(d) at its expense, at any time and from time to time, promptly execute and deliver all further instruments and documents and take all further action that may be necessary or desirable or that the NRC may reasonably request in order to (i) perfect and protect the security interest purported to be created hereby and any liens thereon, (ii) enable the NRC to exercise and enforce its rights and remedies hereunder in respect of the Pledged Interests or (iii) otherwise effect the purposes of this Agreement;

(e) not sell, assign (by operation of law or otherwise), exchange or otherwise dispose of the Pledged Interests;

(f) not create or suffer to exist any lien, security interest or other charge or encumbrance upon or with respect to the Pledged Interests, including any Pledged Interests derived from the proceeds of the Notes which may include, without limitation, proceeds from Minimum Semi-Annual Payments, Annual Mandatory Prepayments, Asset Sale Proceeds or Net Insurance Proceeds (each capitalized term as defined in the applicable Note), except for the security interest created hereby;

(g) not make or consent to any material amendment or other modification or waiver with respect to the Pledged Interests or enter into any agreement or permit to exist any restriction with respect to any Pledged Interest without the consent of the NRC which consent shall not be unreasonably withheld; and

(h) not take or fail to take any action which would in any manner impair the enforceability of the NRC's security interest in any Pledged Interest.

SECTION 7. Additional Provisions Concerning the Pledged Interests.

(a) The Pledgor hereby authorizes the NRC to file, without the signature of the Pledgor where permitted by law, one or more financing or continuation statements, and amendments thereto, relating to the Pledged Interests.

(b) The Pledgor hereby irrevocably appoints the NRC as its attorney-in-fact and proxy, with full authority in the place and stead of the Pledgor and in the name of the Pledgor or otherwise, from time to time in the NRC's discretion, to take any action and to execute any instrument which the NRC may deem necessary or advisable to accomplish the purposes of this Agreement, including, without limitation, to receive, indorse and collect all instruments made payable to the Pledgor representing any dividend, interest payment or other distribution in respect of any Pledged Interest and to give full discharge for the same. This power is coupled with an interest and is irrevocable until all of the Obligations are paid in full and the FMRI Primary Note and the FMRI Secondary Note shall have been terminated.

(c) If the Pledgor fails to perform any agreement or obligation contained herein, the NRC itself may perform, or cause performance of, such agreement or obligation, and the expenses of the NRC incurred in connection therewith shall be payable by Reorganized Fansteel and the Pledgor pursuant to the Indemnification Letter dated the date hereof in favor of the NRC by Reorganized Fansteel and the Pledgor (the "Indemnification Letter") and shall be secured by the Pledged Interests.

(d) Other than the exercise of reasonable care to assure the safe custody of the Pledged Interests while held hereunder, the NRC shall have no duty or liability to preserve rights pertaining thereto and shall be relieved of all responsibility for the Pledged Interests upon surrendering it or tendering surrender of it to the Pledgor. The NRC shall be deemed to have exercised reasonable care in the custody and preservation of the Pledged Interests in its possession if the Pledged Interests are accorded treatment substantially equal to that which the NRC accords its own property, it being understood that the NRC shall not have responsibility for taking any necessary steps to preserve rights against any parties with respect to any Pledged Interest.

(e) The powers conferred on the NRC hereunder are solely to protect its interest in the Pledged Interests and shall not impose any duty upon it to exercise any such powers. Except for the safe custody of any Pledged Interest in its possession, the NRC shall have no duty as to any Pledged Interest or as to the taking of any necessary steps to preserve rights against prior parties or any other rights pertaining to any Pledged Interest.

SECTION 8. Remedies Upon Default. If any Default (as defined in the FMRI Primary Note, the FMRI Secondary Note and, if any, the FMRI Contingent Note, as applicable) shall have occurred and be continuing:

(a) The NRC may exercise in respect of the Pledged Interests, in addition to other rights and remedies provided for herein or otherwise available to it, all of the rights and remedies of a secured party on default under the Code then in effect in the State of Illinois; and without limiting the generality of the foregoing and without notice except as specified below, sell the Pledged Interests or any part thereof in one or more parcels at public or private sale, at any exchange or broker's board or elsewhere, at such price or prices and on such other terms as the NRC may deem commercially reasonable. The Pledgor agrees that, to the extent notice of sale shall be required by law, at least 10 business days' notice to the Pledgor of the time and place of any public sale or the time after which any private sale is to be made shall constitute reasonable notification. The NRC shall not be obligated to make any sale of Pledged Interests regardless of notice of sale having been given. The NRC may adjourn any public or private sale from time to time by announcement at the time and place fixed therefor, and such sale may, without further notice, be made at the time and place to which it was so adjourned.

(b) Any cash held by the NRC as Pledged Interests and all cash proceeds received by the NRC in respect of any sale of, collection from, or other realization upon, all or any part of the Pledged Interests may, in the discretion of the NRC, be held by the NRC as collateral for, and/or then or at any time thereafter applied (after payment of any amounts payable to the NRC pursuant to the Indemnification Letter) in whole or in part by the NRC against, all or any part of the Obligations in such order as the NRC shall elect consistent with the provisions of the Reorganization Plan. Any surplus of such cash or cash proceeds held by the NRC and remaining after payment in full of all of the Obligations shall be paid over to the Pledgor or to such person as may be lawfully entitled to receive such surplus.

SECTION 9. Notices, Etc. All notices and other communications provided for hereunder shall be in writing and shall be mailed (by certified mail, postage prepaid and return receipt requested), telecopied or delivered, if to the Pledgor or to the NRC, to such Person at its address specified below their signature hereto; or as to either such Person at such other address as shall be designated by such Person in a written notice to such other Person complying as to delivery with the terms of this Section 9. All such notices and other communications shall be effective (i) if sent by certified mail, return receipt requested, when received or 3 Business Days after mailing, whichever first occurs, (ii) if telecopied, when transmitted and confirmation is received, if transmitted on a Business Day and, if not, on the next Business Day or (iii) if delivered, upon delivery, if delivered on a Business Day and, if not, on the next Business Day.

SECTION 10. Miscellaneous.

(a) No amendment of any provision of this Agreement shall be effective unless it is in writing and signed by the Pledgor and the NRC, and no waiver of any provision of this Agreement, and no consent to any departure by the Pledgor therefrom, shall be effective unless it is in writing and signed by the NRC, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given.

(b) No failure on the part of the NRC to exercise, and no delay in exercising, any right hereunder or under the FMRI Primary Note, the FMRI Secondary Note, the FMRI Contingent Note, if any, and the Reorganization Plan shall operate as a waiver thereof; nor shall any single or partial exercise of any such right preclude any other or further exercise thereof or the exercise of any other right. The rights and remedies of the NRC provided herein and in the FMRI Primary Note, in the FMRI Secondary Note, in the FMRI Contingent Note, if any, and in the Reorganization Plan are cumulative and are in addition to, and not exclusive of, any rights or remedies provided by law. The rights of the NRC under the FMRI Primary Note, the FMRI Secondary Note, the FMRI Contingent Note, if any, and the Reorganization Plan against any party thereto are not conditional or contingent on any attempt by the NRC to exercise any of its rights under the FMRI Primary Note, the FMRI Secondary Note and the Reorganization Plan against such party or against any other Person, including but not limited to, the Pledgor.

(c) Any provision of this Agreement which is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining portions hereof or thereof or affecting the validity or enforceability of such provision in any other jurisdiction.

(d) This Agreement shall create a continuing security interest in the Pledged Interests and shall (i) remain in full force and effect until the payment in full or release of the Obligations and after the FMRI Primary Note, the FMRI Secondary Note and the FMRI Contingent Note, if any, shall have been paid in full and (ii) be binding on the Pledgor and, by its acceptance hereof, the NRC, and its respective successors, transferees and assigns and shall inure, together with all rights and remedies of the NRC hereunder, to the benefit of the NRC and its respective successors, transferees and assigns. None of the rights or obligations of the Pledgor or the NRC hereunder may be assigned or otherwise transferred without the prior written consent of the other party, which consent shall not be unreasonably withheld, and any such assignment or transfer shall be null and void.

(e) Upon the satisfaction in full of the Obligations after the FMRI Primary Note, the FMRI Secondary Note and the FMRI Contingent Note, if any, shall have been paid in full, (i) this Agreement and the security interests created hereby shall terminate and all rights to the Pledged Interests shall revert to the Pledgor, and (ii) the NRC will, upon the Pledgor's request and at the Pledgor's expense, (A) return to the Pledgor such of the Pledged Interests as shall not have been sold or otherwise disposed of or applied pursuant to the terms hereof, and (B) execute and deliver to the Pledgor, without recourse, representation or warranty, such documents as the Pledgor shall reasonably request to evidence such termination.

(f) This Agreement shall be governed by and construed in accordance with the laws of the State of Illinois, except as required by mandatory provisions of law and except to the extent that the validity and perfection or the perfection and the effect of perfection or non-perfection of the security interest created hereby, or remedies hereunder, in respect of any particular Pledged Interest are governed by the law of a jurisdiction other than the State of Illinois.

(g) This Agreement may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which shall be deemed to be an original, but all of which taken together shall constitute one in the same agreement.

(h) Notwithstanding anything to the contrary contained herein, any and all payments payable to the NRC pursuant to this Pledge Agreement shall be paid to the NRC Designee.

SECTION 11. Submission to Jurisdiction; Waivers. The Pledgor hereby irrevocably and unconditionally:

(a) Submits for itself and its property in any action, suit or proceeding relating to this Pledge Agreement or the FMRI Primary Note, the FMRI Secondary Note, the FMRI Contingent Note, if any, or the Reorganization Plan, or for recognition and enforcement of any judgment in respect thereof, to the jurisdiction of the United States Bankruptcy Court for the District of Delaware and the courts of the State of Illinois, the courts of the United States of America for the Northern District of Illinois, and appellate courts thereof;

(b) Agrees that any such action, suit or proceeding may be brought in such courts and waives any objection that it may now or hereafter have to the venue of any such action, suit or proceeding in any such court or that such action, suit or proceeding was brought in an inconvenient court and agrees not to plead or claim the same;

(c) Irrevocably consents to the service of any and all process in any such action, suit or proceeding by the mailing of copies of such process by registered or certified mail (or any substantially similar form of mail), postage prepaid, to the Pledgor, at its address set forth by its signature below or at such other address of which the NRC shall have been notified pursuant thereto;

(d) To the extent that the Pledgor has or hereafter may acquire any immunity from jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise) with

respect to itself or its property, the Pledgor hereby irrevocably waives such immunity in respect of its obligations under this Pledge Agreement;

(e) Agrees that nothing herein shall affect the right of the NRC to effect service of process in any other manner permitted by law or shall limit the right to sue in any other jurisdiction; and

(f) Waives any right it may have to claim or recover in any legal action or proceeding referred to in this Section any special, exemplary, punitive or consequential damages.

SECTION 12. JURY TRIAL WAIVER. THE PLEDGOR AND NRC (BY ITS ACCEPTANCE OF THIS PLEDGE AGREEMENT) HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVE ANY RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM CONCERNING THIS PLEDGE AGREEMENT, THE FMRI PRIMARY NOTE, THE FMRI SECONDARY NOTE, THE FMRI CONTINGENT NOTE, IF ANY, OR ANY AMENDMENT, MODIFICATION OR OTHER DOCUMENT NOW OR HEREAFTER DELIVERED IN CONNECTION WITH ANY OF THE FOREGOING, AND AGREE THAT ANY SUCH ACTION, PROCEEDING OR COUNTERCLAIM SHALL BE TRIED BEFORE A COURT AND NOT BEFORE A JURY.

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IN WITNESS WHEREOF, the Pledgor has caused this Agreement to be executed and delivered by its officer thereunto duly authorized, as of the date first above written.

FMRI INC.,
a Delaware corporation

By: _____

Name: A. Fred Dohmann
Title: President & CEO

Acknowledged and consented to
this 18 day of DECEMBER, 2003:

FANSTEEL INC.

By: _____

Name: Gary L. Tessitore
Title: President & CEO

FORM OF ASSIGNMENT AND ACCEPTANCE

This Assignment and Assumption (the "Assignment") is dated as of the Effective Date set forth below and is entered into by and between FMRI INC. (the "Assignor") and the UNITED STATES NUCLEAR REGULATORY COMMISSION (the "Assignee"). Capitalized terms used but not defined herein shall have the meanings given to them in the Note identified below (as it may be amended, supplemented, waived or otherwise modified from time to time, the "Note"), receipt of which is hereby acknowledged by the Assignee.

The Assignor hereby irrevocably assigns and transfers to the Assignee, and the Assignee hereby irrevocably accepts and assumes from the Assignor, as of the Effective Date, the interest in and to all of the Assignor's rights and obligations under [the FMRI Primary Note dated December __, 2003, made by FANSTEEL INC. in favor of FMRI in the principal amount of \$30,600,000.00 (the "FMRI Primary Note")/the FMRI Secondary Note dated December __, 2003, made by FANSTEEL INC. in favor of FMRI in the principal amount of \$4,200,000.00 (the "FMRI Secondary Note")/the FMRI Contingent Note dated _____, 20__, made by FANSTEEL INC. in favor of FMRI in a principal amount to be determined (the "FMRI Contingent Note")]. Such assignment is without recourse to the Assignor and, except as expressly provided in this Assignment, without representation or warranty by the Assignor.

(Print or type assignee's name, address and zip code below)

(Insert assignee's social security or tax I.D. No. below)

ASSIGNOR:

FMRI INC.

By: _____

Name:

Title:

[ADDRESS]

[ADDRESS]

[ADDRESS]

ASSIGNEE:

UNITED STATES NUCLEAR REGULATORY
COMMISSION

By: _____

Name:

Title:

[ADDRESS]

[ADDRESS]

[ADDRESS]

Effective Date: _____, 20__