RECORDATION FORM COVER SHEET PATENTS ONLY  To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.  1. Name of conveying party(ies) Regents of University of Minnesota    Conveying party(ies)	Form PTO-1595 (Rev. 07/05)	U.S. DEPARTMENT OF COMMERCE United States Patent and Trademark Office
2. Name and address of receiving party(ies) Regents of University of Minnesota    Name   United States   Department of Energy	PSL RECORDATION FO	RM COVER SHEET S-116,575
Name: United States Department of Energy Internal Address: Interna	To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.	
Internal Address:  Internal Addr	Name of conveying party(ies)	
Additional name(s) of conveying party(les) attached? Yes No  3. Nature of conveyance/Execution Date(s):  Execution Date(s) 05/05/2009  Assignment	Regents of University of Minnesota	
Street Address: 1000 Independence Ave., S.V  Execution Date(s) 05/05/2009  Assignment		Internal Address:
Street Address: 1000 Independence Ave., S.V  Execution Date(s) 05/05/2009  Assignment	Additional name(s) of conveying party(les) attached? Yes V No	
Assignment	3. Nature of conveyance/Execution Date(s):	Street Address: 1000 Independence Ave., S.W
Security Agreement  Joint Research Agreement  Government Interest Assignment  Executive Order 9424, Confirmatory License  Other  4. Application or patent number(s):  A. Patent Application No.(s)  12/418,037  Additional numbers attached?  Additional number of applications and patents involved:  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Washington  State: D.C.  Country: USA  Zip:20585  Additional name(s) & address(es) attached?  Yes ✓ No  6. Total number of applications and patents involved:  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State: D.C.  Country: USA  Zip:20585  Additional name(s) & address(es) attached?  Yes ✓ No  6. Total number of applications and patents involved:  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State: D.C.  Country: USA  Zip:20585  Additional name(s) & address(es) attached?  Yes ✓ No  6. Total number of applications and patents involved:  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State: D.C.  Country: USA  Zip:20585  Additional name(s) & address(es) attached?  Yes ✓ No  6. Total number of applications and patents involved:  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  7. Total fee (37 CFR 1.21(h) & 3.41) \$  Authorized to be charged to deposit account  Enclosed  None required (government interest not affecting title)  8. Payment Information  a. Credit Card Last 4 Numbers  Expiration Date		
Security Agreement	Assignment Merger	City, Washington
Government Interest Assignment  Executive Order 9424, Confirmatory License Other  Additional name(s) & address(es) attached? Yes No  Application or patent number(s): A. Patent Application No.(s)  12/418,037  Additional numbers attached? Yes No  5. Name and address to whom correspondence concerning document should be mailed: Name: Mark P. Dvorscak Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State:    Zip:60439  Phone Number: 630, 252, 2393	Security Agreement L Change of Name	Only. <u>vvasnington</u>
Country: USA Zip: 2055  Additional name(s) & address(es) attached? ☐ Yes ✓ No  4. Application or patent number(s): ☐ This document is being filed together with a new application.  B. Patent No.(s)  4. Application No.(s)  Additional numbers attached? ☐ Yes ✓ No  5. Name and address to whom correspondence concerning document should be mailed:  Name: Mark P. Dvorscak  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State: ☐ Zip:60439  Phone Number: 630:252-2393	<del>-</del>	State: D.C.
Additional name(s) & address(es) attached?  Yes  No  4. Application or patent number(s):		Country: USA Zip: 20585
4. Application or patent number(s):  A. Patent Application No.(s)  12/418,037  Additional numbers attached? Yes Vo  5. Name and address to whom correspondence concerning document should be mailed: Name: Mark P. Dvorscak  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State:  L Zip:60439  Phone Number: 630.252-2393	<del>                                   </del>	Vac ØMa
A. Patent Application No.(s)  12/418,037  Additional numbers attached? Yes No  5. Name and address to whom correspondence concerning document should be mailed:  Name: Mark P. Dvorscak  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State: L Zip:60439  B. Patent No.(s)  6. Total number of applications and patents involved: 1  7. Total fee (37 CFR 1.21(h) & 3.41) \$  Authorized to be charged by credit card Authorized to be charged to deposit account Senciosed  None required (government interest not affecting title)  8. Payment Information  a. Credit Card Last 4 Numbers Expiration Date		
Additional numbers attached? Yes No  5. Name and address to whom correspondence concerning document should be mailed:  Name: Mark P. Dvorscak  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State: L Zip:60439  Additional numbers attached? Yes No  6. Total number of applications and patents involved: 1  7. Total fee (37 CFR 1.21(h) & 3.41) \$  Authorized to be charged by credit card Authorized to be charged to deposit account  Enclosed  None required (government interest not affecting title)  8. Payment Information  a. Credit Card Last 4 Numbers Expiration Date		•
Additional numbers attached?		
5. Name and address to whom correspondence concerning document should be mailed:  Name: Mark P. Dvorscak  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State:    Zip:60439  City: Argonne  State:    Zip:60439  City: Argonne  Shore Number: 630-252-2393	· · · -,- ·	
5. Name and address to whom correspondence concerning document should be mailed:  Name: Mark P. Dvorscak  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State:    Zip:60439  City: Argonne  State:    Zip:60439  City: Argonne  Shore Number: 630-252-2393	Additional numbers at	  sched2
involved: 1  Name: Mark P. Dvorscak  Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State:		
Internal Address: U. S. Dept. of Energy, IPLD  Street Address: 9800 S. Cass Ave  City: Argonne  State:  L Zip:60439    Authorized to be charged by credit card   Authorized to be charged to deposit account   Enclosed   ✓ None required (government interest not affecting title)  8. Payment Information  a. Credit Card Last 4 Numbers   Expiration Date   Expiration Date	concerning document should be mailed:	involved: 1
Authorized to be charged to deposit account  ☐ Enclosed ☐ None required (government interest not affecting title)  City: Argonne State: ☐ Zip:60439 ☐ Authorized to be charged to deposit account ☐ Enclosed ☐ None required (government interest not affecting title)  8. Payment Information a. Credit Card Last 4 Numbers	Name:Mark P. Dvorscak	7. Total fee (37 CFR 1.21(h) & 3.41) \$
Street Address: 9800 S. Cass Ave  ✓ None required (government interest not affecting title)  City: Argonne  State:   Zip:60439  Enclosed  ✓ None required (government interest not affecting title)  8. Payment Information  a. Credit Card Last 4 Numbers Expiration Date	Internal Address: <u>U. S. Dept. of Energy, IPLD</u>	Authorized to be charged by credit card
City: Argonne State:   Zip:60439   Expiration Date   Expiration Da		Authorized to be charged to deposit account
City: Argonne  State:  L Zip:60439  8. Payment Information  a. Credit Card Last 4 Numbers Expiration Date	Street Address: 9800 S. Cass Ave	
State: IL Zip:60439 a. Credit Card Last 4 Numbers Expiration Date		1-11
State:  L Zip:60439 Expiration Date	City: Argonne	· ·
Phone Number: 620, 252-2303	State: <u>  L</u> Zip: <u>60439</u>	
1 D. Deposit Account Number	Phone Number: <u>630-252-2393</u>	b Denocit Account Number
Fax Number: 630-252-2779	Fax Number: 630-252-2779	
Email Address: Authorized User Name	Email Address:	Authorized User Name
9. Signature: 0Mu = 3/25/09		
Signature Date	<u>-</u>	Date
Michael J. Dobbs #58,093 Total number of pages including cover sheet, attachments, and documents: 2	Michael J. Dobbs #58,093	

Documents to be recorded (Including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

PATENT REEL: 023152 FRAME: 0621

## CONFIRMATORY LICENSE

Title of Invention: Methodology to Produce Metallic Iron in a Hearth Furnace Using Carbonaceous Fuel and Injection of Reducing Gases

Inventor(s): Rodney L. Bleifuss, David J. Englund, Iwao Iwasaki, Donald R. Fosnacht, Mark M.

Brandon, Bradford G. True

Patent Application Serial No: 12/418,037

Filing Date April 3, 2009

Patent Number:

**Issue Date:** 

Name of Contractor (i.e. Contractor, Subcontractor, Grant, or Cooperative Agreement, as applicable): University of Minnesota

DOE Contract No. (i.e. Contract, Subcontract, Grant, or Cooperative Agreement, as applicable): DE-FG36-05GO15185

**DOE Case No.: S-116,575** 

Contractor Docket No.: Z08114

The Contractor has reported the above-identified invention as a Subject Invention to DOE and has elected to retain title thereto.

Accordingly, this document is confirmatory of the nonexclusive, nontransferable, irrevocable, paid-up, worldwide license in this subject invention, patent application and any resulting patent, including any continuation, divisional, reissue, or supplemental application thereof, to practice or to have practiced for or on behalf of the United States throughout the world; and of all other rights acquired by the Government by the patent rights clause in the above-identified contract.

It is understood and agreed that this license does not preclude the Government from asserting rights under the provisions of said contract or of any other agreement between the Government and the Contractor, or from asserting any other rights of the Government with respect to the above-identified subject invention.

The Government is hereby granted an irrevocable power to inspect and make copies of the aboveidentified patent application.

Signed this

of the University of Minnesota Contractor Name

Official's Name and Title (Typed) Jay W. Schrankler, Executive Director

Office for Technology Commercialization, 1000 Westgate Drive, Suite 160, St. Paul, MN 55114-8658

PATENT

REEL: 023152,FRAME, 0622 \*\*