

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT																
NATURE OF CONVEYANCE:	ASSIGNMENT																
CONVEYING PARTY DATA																	
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Randall F Lind</td> <td>02/06/2012</td> </tr> <tr> <td>Peter D Lloyd</td> <td>02/06/2012</td> </tr> <tr> <td>Lonnie J Love</td> <td>02/06/2012</td> </tr> <tr> <td>Mark W Noakes</td> <td>02/06/2012</td> </tr> <tr> <td>Bradley S Richardson</td> <td>02/08/2012</td> </tr> <tr> <td>John C Rowe</td> <td>02/06/2012</td> </tr> <tr> <td>Francois G Pin</td> <td>02/03/2012</td> </tr> </tbody> </table>		Name	Execution Date	Randall F Lind	02/06/2012	Peter D Lloyd	02/06/2012	Lonnie J Love	02/06/2012	Mark W Noakes	02/06/2012	Bradley S Richardson	02/08/2012	John C Rowe	02/06/2012	Francois G Pin	02/03/2012
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<table border="1"> <tr> <td>Name:</td> <td>UT-Battelle, LLC</td> </tr> <tr> <td>Street Address:</td> <td>One Bethel Valley Road</td> </tr> <tr> <td>Internal Address:</td> <td>4500N, MS-6258</td> </tr> <tr> <td>City:</td> <td>Oak Ridge</td> </tr> <tr> <td>State/Country:</td> <td>TENNESSEE</td> </tr> <tr> <td>Postal Code:</td> <td>37831-6258</td> </tr> </table>		Name:	UT-Battelle, LLC	Street Address:	One Bethel Valley Road	Internal Address:	4500N, MS-6258	City:	Oak Ridge	State/Country:	TENNESSEE	Postal Code:	37831-6258				
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PROPERTY NUMBERS Total: 1																	
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13033231</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13033231												
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Application Number:	13033231																
CORRESPONDENCE DATA																	
Fax Number:	(865)574-0381																
Phone:	(865) 574-4179																
Email:	warfielde@ornl.gov																
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>																	
Correspondent Name:	Colin L. Cini																
Address Line 1:	One Bethel Valley Road																
Address Line 2:	4500N, MS-6258																
Address Line 4:	Oak Ridge, TENNESSEE 37831-6258																

PATENT

ATTORNEY DOCKET NUMBER:	2452
NAME OF SUBMITTER:	Elizabeth Warfield
<p>Total Attachments: 9</p> <p>source=2452_RecordationCVR_AND_Assignment#page1.tif source=2452_RecordationCVR_AND_Assignment#page2.tif source=2452_RecordationCVR_AND_Assignment#page3.tif source=2452_RecordationCVR_AND_Assignment#page4.tif source=2452_RecordationCVR_AND_Assignment#page5.tif source=2452_RecordationCVR_AND_Assignment#page6.tif source=2452_RecordationCVR_AND_Assignment#page7.tif source=2452_RecordationCVR_AND_Assignment#page8.tif source=2452_RecordationCVR_AND_Assignment#page9.tif</p>	

**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)

Randall F. Lind Bradley S. Richardson
Peter D. Lloyd John C. Rowe
Lonnie J. Love Francois G. Pin
Mark W. Noakes

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies)

Name: UT-Battelle, LLC

Internal Address: 4500N, MS-6258

Street Address: One Bethel Valley Road

City: Oak Ridge

State: TN

Country: USA Zip: 37831-6258

Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) 2/8/2012

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Joint Research Agreement
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other _____

4. Application or patent number(s):

☐ This document is being filed together with a new application.
A. Patent Application No.(s)
13/033,231
B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Colin L. Cini

Internal Address: UT-Battelle, LLC

Street Address: One Bethel Valley Road

4500N, MS-6258

City: Oak Ridge

State: TN Zip: 37831-6258

Phone Number: (865) 574-4179

Fax Number: (865) 574-0381

Email Address: cini@ornl.gov

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

- ☐ 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 _____

b. Deposit Account Number 13-1958

Authorized User Name Elizabeth Warfield

9. Signature:

/Colin L. Cini/
Signature

4/17/2012
Date

Colin L. Cini, Reg. No. 51,563

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

9

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

ASSIGNMENT

WHEREAS, we the below-named inventors whose residences are as stated below, have an interest in an invention entitled:

STACK SAMPLING APPARATUS

(hereinafter referred to as "Subject Invention") for which are described in United States Patent Application No. 13/033,231 filed on February 23, 2011, and

WHEREAS, UT-BATTELLE, LLC, a limited liability company of the State of Tennessee, having an office at One Bethel Valley Road, P. O. Box 2008, Oak Ridge, Tennessee 37831-6258, hereinafter referred to as "ASSIGNEE," is desirous of acquiring our entire right, title and interest of the undersigned in the same;

NOW, THEREFORE, in accordance with the terms of our employment agreement with ASSIGNEE and for good and valuable consideration, the receipt of which is hereby acknowledged, we hereby assign and transfer to ASSIGNEE and its successors in interest our entire right, title and interest in the Subject Invention to all rights of priority thereto pursuant to the International Convention for the Protection of Industrial Property, and in any Letters Patent on the Subject Invention that may be granted in the United States of America and in any and all foreign countries, including any and all Letters Patent that are divisions, reissues, continuations, substitutions or extensions of any Letters Patent or patent applications therefor on the Subject Invention.

We hereby authorize and request the Commissioner of the United States Patent and Trademark Office and the officials of any and all foreign countries to issue any and all of said Letters Patent, when granted, to the ASSIGNEE.

Further, we hereby agree to communicate to said ASSIGNEE or its representatives any facts known to us respecting said Subject Invention, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, to execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, and to make all rightful oaths and generally do everything possible to aid said ASSIGNEE and its representatives to obtain and enforce proper protection for said Subject Invention in the United States of America and in any and all foreign countries.

We further agree that the terms, covenants and conditions of this assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding on us, our heirs, legal representatives, and assigns.

Full Name of First Inventor: Randall F. Lind

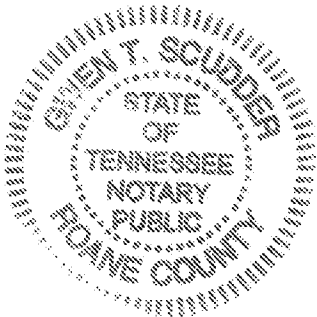
Signature: [Handwritten Signature] Date: 2-6-2012

Residence: 350 Rivers Edge Drive, Loudon, Tennessee 37774

State of Tennessee)
County of Roane)

On this 6 day of February, 2012, before me, a Notary Public in and for the County and State aforesaid, appeared **RANDALL F. LIND** to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.



[Handwritten Signature]
Notary Public

SEAL

My Commission Expires:

My Commission Expires Thursday, August 14, 2012.

Full Name of First Inventor: Peter D. Lloyd

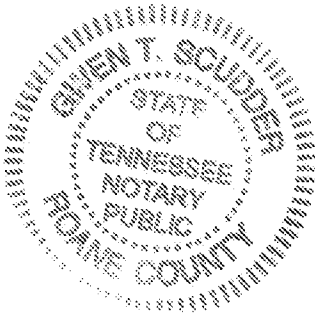
Signature: Peter D. Lloyd Date: 2/6/2012

Residence: 11420 Berry Hill Drive, Knoxville, Tennessee 37931

State of Tennessee)
County of Roane)

On this 6 day of February, 2012, before me, a Notary Public in and for the County and State aforesaid, appeared **PETER D. LLOYD** to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.



Given T. Scudder
Notary Public

SEAL

My Commission Expires:

My Commission Expires Thursday, August 14, 2012.

Full Name of First Inventor: Lonnie J. Love

Signature: _____

Date: 2/6/12

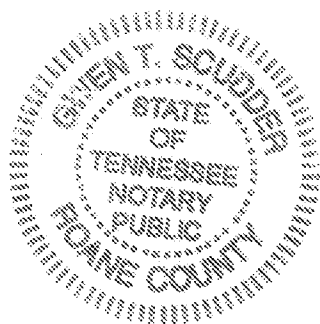
Residence: 13036 Lady Slipper Lane, Knoxville, Tennessee 37934

State of Tennessee)

County of Roane)

On this 6 day of February, 2012, before me, a Notary Public in and for the County and State aforesaid, appeared LONNIE J. LOVE to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.



Gwen T. Scudder
Notary Public

SEAL

My Commission Expires:

My Commission Expires Thursday, August 14, 2012.

Full Name of First Inventor: Mark W. Noakes

Signature: _____

Date: _____

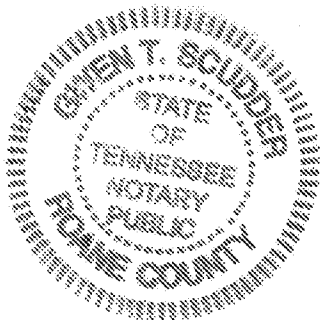
Residence: 1416 Pine Springs Road, Knoxville, Tennessee 37922

State of Tennessee)

County of Sevier)

On this 2 day of February, 2012, before me, a Notary Public in and for the County and State aforesaid, appeared **MARK W. NOAKES** to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.



Owen T. Scudder
Notary Public

SEAL

My Commission Expires:

My Commission Expires Thursday, August 14, 2012.

Full Name of First Inventor: Bradley S. Richardson

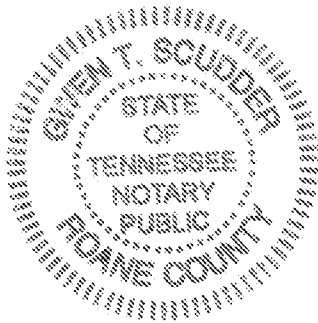
Signature: *Bradley S. Richardson* Date: 2/8/2012

Residence: 2901 Millstream Lane, Knoxville, Tennessee 37931

State of Tennessee)
County of Roane)

On this 8 day of February, 2012, before me, a Notary Public in and for the County and State aforesaid, appeared **BRADLEY S. RICHARDSON** to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.



Owen T. Scudder
Notary Public

SEAL

My Commission Expires:

My Commission Expires Thursday, August 14, 2012.

Full Name of First Inventor: John C. Rowe

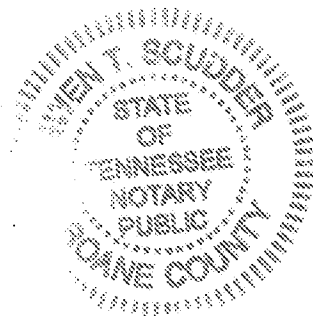
Signature: John C. Rowe Date: 2-6-12

Residence: 932 View Harbour Road, Knoxville, Tennessee 37934

State of Tennessee)
County of Roane)

On this 6 day of February, 2012, before me, a Notary Public in and for the County and State aforesaid, appeared **JOHN C. ROWE** to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.



John T. Scudde
Notary Public

SEAL

My Commission Expires:

My Commission Expires Thursday, August 14, 2012.

Full Name of First Inventor: Francois G. Pin

Signature: [Signature] Date: February 3, 2012

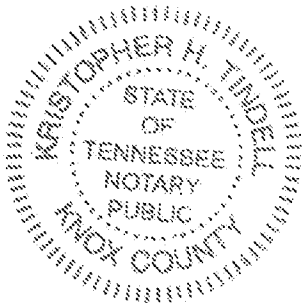
Residence: 4917 West Summit Circle, Knoxville, Tennessee 37919

State of Tennessee)
County of KNOX)

On this 3rd day of February, 2012, before me, a Notary Public in and for the County and State aforesaid, appeared FRANCOIS G. PIN to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.

[Signature]
Notary Public



SEAL

My Commission Expires:

10/4/14