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Subject: RE: ACT: AMENDMENT NUMBER 02 TO LICENSE NUMBER 04-29234-01
From: rspillmann@clear-path-tech.com
Date: Fri, Apr 16, 2010 5:21 pm
To: "Cook, Jackie" <Jackie.Cook@nrc.gov>
Attach: bottom.letterhead

Dear Jackie,

Thank you again for providing us the amended license.

1. Please note that we have communicated to the California Rad Health Branch that we would like to add Dr. Tsuey Fen Chuang as RSO to the California license. They have and are amending the license to include her as RSO. If would be so kind, please advise what I have to do to have the same reflected in our license with USNRC.

2. Lastly, I noticed that the license is restricted to R&D only. As you may be aware we are a manufacture of the product described in the SSDR for our equipment issued by California. My question is what is the process to have the US NRC license expand usage to manufacture, sale and distribution.

Thank you for your kind attention.

Regards

Roger W.A. Spillmann
President/CEO
Clear Path Technologies, Inc.
561 W. Rincon Street
Corona . CA 92880
Tel: 951-278-3585
Fax: 951-278-2032
Cell: 951-264-2617

-------- Original Message --------
Subject: ACT: AMENDMENT NUMBER 02 TO LICENSE NUMBER 04-29234-01
From: "Cook, Jackie" <Jackie.Cook@nrc.gov>
Date: Fri, April 16, 2010 12:39 pm
To: "rspillmann@clear-path-tech.com" <rspillmann@clear-path-tech.com>

Mr. Spillmann:

Please see attached amendment number 02 for License Number 04-29234-01. A hard

copy will be coming in the mail via USPS. Please review for accuracy and completeness.

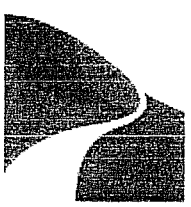
I apologize in the delay of getting this to you.

Please do not hesitate to contact me at your convenience if you have any questions or additional concerns.

Have a GREAT Friday & Weekend!

Sincerely,

Jacqueline "Jackie" D. Cook
Senior Health Physicist
Division of Nuclear Materials Safety
Nuclear Materials Safety Branch B
612 E. Lamar Blvd., Suite 400
Arlington, TX 76011
817-860-8132 (office)/817-860-8263 (fax)
e-mail address: Jackie.Cook@nrc.gov



CLEAR PATH
TECHNOLOGIES, INC

Dr. Tsuey Fen Chuang

Has successfully completed the Technical Short Course entitled

Radiation Safety Officer

January 11 – 15, 2010

This certificate presented in Las Vegas, Nevada, January 15, 2010

By Nevada Technical Associates, Inc.

Approval codes for C.E. units are: ASRT 30.5 units; NVZ0146001, AAHP 32 units; 2008-00-005, ABIH 4.5 units; 08-1362

Robert Holloway

Robert Holloway, Ph.D.
Course Coordinator

DR. TSUEY-FEN CHUANG (CHANG)

EDUCATION:

Ph.D., Physics — **December, 1988**
University of California, Riverside
Dissertation Title: Laboratory Simulations of Solar Wind-Comet Interactions.
GPA - 3.96 on the basis of 4.0

Master of Science, Physics — **December, 1981**
University of California, Riverside

Bachelor of Science — **June, 1976**
National Central University
Taiwan, R.O.C.

COMPUTER EDUCATION:

Proficient in Visual Basic, Data Structure, Unix, C and C++ Programming, Java, HTML, NI Labview, Adobe Afterffects and Photoshop. I also have knowledge of Fortran, Microsoft Word, Excel, Cricket Graph, MacDraw, Free Hand, and Virtural Instrumentation and FPGA Programming.

EXPERIENCE:

Senior Scientist and Radiation Safety Officer — **August 2007 to present**
Clear Path Technologies, Inc.
561 W. Rincon Street
Corona, CA 92880
Scientific research and data analysis.

Senior Scientist — **Aug. 2000 to February 2007**
HiEnergy Technologies, Inc.
1601 Alton Parkway, Unit B
Irvine, CA 92606
Scientific research and data analysis.

Senior Scientist — **Aug. 2000 to December 2006**
HiEnergy Technologies, Inc.
1601 Alton Parkway, Unit B
Irvine, CA 92606
Scientific research and data analysis.

Lecturer — **Jan. 1998 to June 2002**
Physics Department
University of California, Riverside
Taught general Physics, Electronics and modern physics labs.

Post Graduate Researcher — **Nov. 1995 to December. 1998**
I.G.P.P.
University of California, Riverside
Experimental Research on space plasma physics.

Research Scientist — **January 1992 to August, 1995**
Advanced Physics Corporation
Theoretical Research in magnetic fusion.

Lecturer — **August 1992 to September 1992**
Summer Session, Physics Department
University of California, Irvine
Taught general physics.

Post Graduate Researcher — **April 1989 to April 1992**
Physics Department
University of California, Irvine
Experimental research on z-pinch.

Post Graduate Researcher — **January 1989 to March 1989**
I.G.P.P.
University of California, Riverside
Experimental Research on space plasma physics.

Research Assistant — **February, 1985 to December, 1988**
University of California, Riverside
Independent research in laboratory
simulations of solar wind-comet interactions.

Research Assistant — **January, 1982 to March, 1983**
University of California, Riverside
Independent research in theoretical
atomic and molecular physics.

Teaching Assistant
University of California, Riverside
Supervised students in labs and
taught discussion sections.

September, 1980 to June, 1982

Teaching Assistant
University of Georgia, Athens
Taught undergraduate labs.

September, 1977 to June, 1980

PUBLICATIONS:

1. T-F Chang, R-U Rahman and R. S. White, "Laboratory Simulation of Cometary Neutral Gas Ionization," Journal of Geophysical Research, Vol. 94, No. A5, 5533, 1989.

2. T-F Chang, A. Fisher and A. Van Drie, "X-ray results from a modified nozzle and double gas puff z pinch", .1. Appl. Phys., 69(6), 3447, 1991.

3. B.C. Maglich and T-F Chang, "Stabilization by electron oscillations of stored ions at densities in excess of the space charge limit", Physical Review Letters, Vol. 70, No 3, 299, 1993.

4. T-F Chang, "Generalized criterion for controlled fusion in D large orbit plasmas," Nuclear Instruments and Methods in Physics Research, Section A 346, 322, 1994.

5. B.C. Maglich, T-F Chang, C. Powell, J. Nering and A. Wilinerding, "Modern Magnetic Fusion", Physics of High Energy Particles in Toroidal Systems, 292, 1994.

6. S.C. Maglich, 1-F Chang, D.A. Gross, "Accelerator Driven modular aneutronic production of tritium from d +d to T + p+4 Mev in self- coiling beam of deuterons (without target or blanket)", 1995.

7. G. Yur, T-F Chang, H.U. Rahman, and J. Birn, "Magnetotail structures in a laboratory magnetosphere", Journal Geophysical Research, Vol. 104, (No A7), 14517, 1999.

HONORS AND AFFILLATIONS:

Chancellor's Patent Fund - University of California, Riverside, 1987.
The best teaching assistant of the year 1978, Dep. of Physics, University of Georgia, Athens.
Chinese Science and Humanity Scholarship, National Central University, R.O.C., 1974.
Member of American Physical Society.

RADIOACTIVE MATERIAL LICENSE

Pursuant to the California Code of Regulations, Division 1, Title 17, Chapter 5, Subchapter 4, Group 2, Licensing of Radioactive Material, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, use, possess, transfer, or dispose of radioactive material listed below; and to use such radioactive material for the purpose(s) and at the places(s) designated below. This license is subject to all applicable rules, regulations, and orders of the Department of Public Health now or hereafter in effect and to any standard or specific condition specified in this license.

1. Licensee	**Clear Path Technologies, Inc.**	3. License Number 7127-33	Amendment Number : 7
2. Address	561 W. Rincon Street Corona, CA 92880	4. Expiration date August 15, 2012	(1)
Attention:	Alexander Vaucher, Ph.D. Radiation Safety Officer	5. Inspection agency	Radiologic Health Branch South

License Number 7127-33 is hereby amended as follows:

6. Nuclide	7. Form	8. Possession Limit
A. Hydrogen-3	A. Sealed sources (Thermo MF Physics Corporation Model A-3062 D-T neutron generator)	A. 3 sources not to exceed 2.0 Ci each.
B. Hydrogen-3	B. Sealed sources (Thermo MF Physics Corporation Model A-3093 D-T neutron generator)	B. 2 sources not to exceed 2.0 Ci each.

9. Authorized Use

A. To be used for research and development of prompt and delayed gamma neutron activation analysis systems. To be used for possession incident to manufacture and distribution of SIEGMA ™ 3E3, SIEGMA ™ 3M3 and **SIEGMA ™ 3X3** devices to persons authorized to receive the licensed material pursuant to the terms and conditions of specific licenses issued by the Nuclear Regulatory Commission, Agreement State, or Licensing State, and for possession incident to source installation and removal, relocation, and radiation surveys of SIEGMA ™ 3E3, SIEGMA ™ 3M3 and **SIEGMA ™ 3X3** devices, and for training of persons in the use of SIEGMA ™ 3E3, SIEGMA ™ 3M3 and **SIEGMA ™ 3X3** devices.

B. To be used for research and development of prompt and delayed gamma neutron activation analysis systems.

LICENSE CONDITIONS

10. Radioactive material shall be used only at the following locations:

(a) 1601 Alton Parkway, Suite B, Irvine, CA.

(b) 561 W. Rincon Street, Corona, CA.

11. This license is subject to an annual fee for sources of radioactive material authorized to be possessed at any one time as specified in Items 6, 7, 8 and 9 of this license. The annual fee for this license is required by and computed in accordance with Title 17, California Code of Regulations, Sections 30230-30232 and is also subject to an annual cost-of-living adjustment pursuant to Section 100425 of the California Health and Safety Code.

12. Radioactive material may be used by, or under the supervision of and in the physical presence of, the following individuals:

(a) Alexander Vaucher, Ph.D.

(b) Tsuey-Fen Chuang, Ph.D.

(c) **Vladimir Stanich**

(d) **David Morrison**

(e) **Bryan Slack**

RADIOACTIVE MATERIAL LICENSE

License Number: 7127-33

Amendment Number: 7

13. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 7, 8 and 9 of this license in accordance with the statements, representations, and procedures contained in the documents listed below. The Department's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    (a) The new application dated September 9, 2002, with attachments, signed by Bogdan C. Maglich, Ph.D., supplemented by the facsimile letter with attachments, dated February 4, 2003, the letters with attachments dated May 9, 2003 and July 17, 2003, and the letters dated June 10, 2003 and June 26, 2003, all signed by Mu Young Lee, Ph.D.

    (b) The letters with attachments dated October 22, 2004, November 11, 2004, November 23, 2004, all signed by Bogdan Maglich, Ph.D., supplemented by the letters with attachments dated November 18, 2004, November 24, 2004, and November 29, 2004, all signed by Alexander Vaucher, Ph.D., regarding the addition of the Sodern neutron generator, procedures for use at the temporary job sites.

    (c) The letter with attachments, dated February 7, 2006, and the letter dated March 15, 2006, both signed by Dr. Alexander Vaucher, Vice President, R & D, regarding operation and dose rates related to the addition of API-120 neutron generator.

    (d) The letter dated June 26, 2006, signed by Roger W. A. Spillmann, President and Chief Executive Officer, with attached application for a manufacturing and distribution license and the letter dated September 29, 2006, signed by Alexander Vaucher, Ph.D., Chief Scientist and Vice President of Research and Development, with attached Radiation Safety Manual, Revision 1, and additional information on radiation safety of SIEGMA ™ 3E3 and SIEGMA ™ 3M3 devices.

    (e) The letters dated September 5, 2007, September 21, 2007, and September 28, 2007, all signed by Roger Spillmann, President and Chief Executive Officer, regarding bankruptcy proceedings, change in name and ownership, new use location, changes in operations and possession limits, and changes to personnel.

    (f) The letter dated November 29, 2007, signed by Roger Spillmann, President and Chief Executive Officer, regarding a request to continue research and development of prompt and delayed gamma neutron activation analysis systems, and to continue manufacture, distribution, and servicing of SIEGMA devices.

    (g) The letters dated July 15, 2009, and March 11, 2009, with attachments both signed by Roger Spillmann, President and Chief Executive officer, Clear Path Technologies, Inc., regarding incorporating SIEGMA ™ 3X3 devices.

14. (a) The Radiation Safety Officer in this program shall be Alexander Vaucher, Ph.D.

    (b) The Alternate Radiation Safety Officer in this program shall be **Tsuey-Fen Chuang, Ph.D.**

15. The licensee shall conduct a physical inventory every six months to account for all sealed sources and/or devices received and possessed under the license. Records of the inventories shall be maintained for inspection, and may be disposed of following Department inspection.

16. The licensee shall comply with all requirements of Title 17, California Code of Regulations, Section 30373 when transporting or delivering radioactive materials to a carrier for shipment. These requirements include: (packaging, marking, labeling, loading, storage, placarding, monitoring, and accident reporting). Shipping papers shall be maintained for inspection pursuant to the U.S. Department of Transportation requirements (Title 49, Code of Federal Regulations, Part 172, Sections 172.200 through 172.204).

17. Radioactive materials shall be used by occupational workers in such a manner that the dose limits specified in Title 10, Code of Federal Regulations, Part 20, Subpart C, Sections 20.1201 through 20.1208 are not exceeded.

18. The licensee shall monitor occupational exposures to radiation and shall supply and require the use of individual monitoring devices by personnel as required by Title 10, Code of Federal Regulations, Part 20, Section 20.1502 (a).

RADIOACTIVE MATERIAL LICENSE

License Number: 7127-33

Amendment Number: 7

19. Records of leak test results shall be kept in units of microcuries and maintained for inspection. Records may be disposed of following Department inspection. Any leak test revealing the presence of 0.005 microcuries or more of removable radioactive material shall be reported to the Department of Public Health, Radiologic Health Branch MS 7610, P.O. Box 997414, Sacramento, CA 95899-7414, within five days of the test. This report shall include a description of the defective source or device, the results of the test, and the corrective action taken.

20. The licensee will provide the Low Level Radioactive Waste (LLRW) reports specified in the California Health and Safety Code section 115000.1(h) to the California Department of Public Health (CDPH) on an annual basis for both shipped and stored LLRW. Alternatively, LLRW shipment information may be provided on a per shipment basis. LLRW shipment information and annual reports shall be mailed to:

    Attn: LLRW Tracking Program
    California Department of Public Health
    Radiologic Health Branch MS 7610
    P.O. Box 997414
    Sacramento, CA 95899-7414

21. **The licensee shall distribute only sealed sources and/or devices for which a Sealed Source and Device Registry Certificate has been issued by the California Department of Public Health, the U.S. Nuclear Regulatory Commission, an Agreement State or a Licensing State. Sealed sources and/or devices distributed must adhere to the design specifications described in the Sealed Source and Device Registry Certificate. Any changes in the design or specifications of these sealed sources and/or devices require the manufacturer to apply for and receive an amendment to the Sealed Source and Device Registry Certificate prior to distribution. The licensee may distribute sources and/or devices without a Sealed Source and Device Registry Certificate provided the recipient is authorized to possess such items by license condition or applicable state or federal regulations and laws.**

Issued for the California Department of Public Health

Date: 3/11/10 By:

Ronald Rogus
Senior Health Physicist
Radiologic Health Branch
P.O. Box 997414, MS 7610
Sacramento, CA 95899-7414

MAY 17 2011
DATE

This is to acknowledge the receipt of your letter/application dated 4/16/11, and to inform you that the initial processing, which includes an administrative review, has been performed.

☑ There were no administrative omissions. Your application will be assigned to a technical reviewer. Please note that the technical review may identify other omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card:

The action you requested is normally processed within 90 days.

☐ A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 575117.
When calling to inquire about this action, please refer to this mail control number.
You may call me at (817) 860-8103.

Sincerely,

Carol L. Hill

Licensing Assistant

NRC FORM 532 (RIV)
(10-2010)

BETWEEN:

Accounts Receivable/Payable
and
Regional Licensing Branches

[FOR ARPB USE]
INFORMATION FROM LTS

Program Code: 03620
Status Code: Pending Amendment
Fee Category: 3M
Exp. Date:
Fee Comments:
Decom Fin Assur Reqd: N

License Fee Worksheet - License Fee Transmittal

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee:	CLEAR PATH TECHNOLOGIES, INC.
Received Date:	05/09/2011
Docket Number:	3037298
Mail Control Number:	575117
License Number:	04-29234-01
Action Type:	Amendment

2. FEE ATTACHED

Amount: /

Check No.: /

3. COMMENTS

Signed: Colleen Murnahan

Date: 5-11-2011

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered / /)

1. Fee Category and Amount: _____

2. Correct Fee Paid. Application may be processed for:

Amendment: _____

Renewal: _____

License: _____

3. OTHER _____

_____

Signed: _____

Date: _____