

**NORTHROP GRUMMAN**  
*Mission Systems*

Northrop Grumman Space & Mission Systems Corp.  
**Tactical Systems Division**  
12900 Federal Systems Park Drive  
Fairfax, Virginia 22033  
Telephone 703-968-1000 Fax 703-803-4742

June 8, 2007

*NM18 2*

U. S. Nuclear Regulatory Commission  
Region I  
Division of Nuclear Materials Safety  
475 Allendale Road  
King of Prussia, PA 19406-1415

*45-25631-01*  
*03036359*

Attn: LAT

To Whom It May Concern:

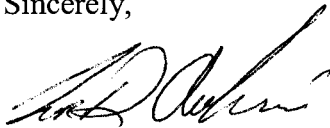
Mr. Bryan Parker, Health Physicist at the USNRS Atlanta office, has advised us that in order to have our license updated that we need to request the RSO change.

In regard to the NRC license, please note that under Conditions, paragraph 11, Timothy Stiller's name needs to be replaced with Todd Adkins.

We are providing a copy of the U. S. Nuclear Regulatory Commissions Materials License, Certificates of Training in Radiation Safety Officer with DOT Option and DOT & NRC Requirements for Shipping and Receiving Radioactive Materials along with Todd Adkins' resume.

Please re-issue the License to reflect the above mentioned changes.

Sincerely,



Todd Adkins  
Electrical Engineer  
Northrop Grumman Corporation

Enclosures: a/s

2007 JUN 11 PM 1:21  
RECEIVED  
REGION I

*140649*

**NMSS/RGN1 MATERIALS-002**

**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Northrop Grumman Mission Systems	3. License No. 45-25631-01
2. 12900 Federal Systems Park Drive M/S FP1/4166 Fairfax, Virginia 22033	4. Expiration Date: September 30, 2013
	5. Docket No. 080-36359

- |  |  |   |
|--|--|---|
| <p>6. Byproduct, source, and/or special nuclear material</p> <p>A. Nickel 63</p> <p>B. Nickel 63</p> | <p>7. Chemical and/or physical form</p> <p>A. Sealed source/foil (DuPont<br/>Pack Model No. 1E3-<br/>604R; AEA Technology<br/>Models NBC or NBCD)</p> <p>B. Sealed source/foil (AEA<br/>Technology QSA, Inc.<br/>Models NBC or NBCD)</p> | <p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. No single source to exceed the maximum activity specified in the certificate of registration issued by the U. S. Nuclear Regulatory Commission or an Agreement State</p> <p>B. No single source to exceed the maximum activity specified in the certificate of registration issued by the U. S. Nuclear Regulatory Commission or an Agreement State</p> |
|--|--|---|

9. Authorized use:
- A. For research and development as defined in 10 CFR 30.4, to be used as a component of Smith Industries Model ACADA chemical agent detector for electronic testing.
  - B. For research and development as defined in 10 CFR 30.4, to be used as a component of Smith Industries Model No. GID-3 chemical agent detector for electronic testing.



**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License No.  
45-25631-01

Docket No.  
030-36359

CONDITIONS

10. Licensed material shall be used and stored at the licensee's facilities located at 12900 Federal Systems Park Drive, Fairfax, Virginia.
11. A. Licensed material shall be used by, or under the supervision of, Timothy Stiller or Jeffrey S. Ray, P.E., Esq.
- B. The Radiation Safety Officer (RSO) for this license is Timothy Stiller.
12. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.
- B. In the absence of a certificate of registration indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
- C. Sealed sources need not be leak tested if they contain only hydrogen 3, or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain no more than 3.7 megabecquerels [100 microcuries] of beta or gamma emitting material or not more than 370 kilobecquerels (10  $\mu$ Ci) of alpha emitting materials for they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- D. The leak test shall be capable of detecting the presence of 185 becquerels (Bq) (0.005  $\mu$ Ci) of radioactive material on the test sample. If the test reveals the presence of 185 Bq (0.005  $\mu$ Ci) or more of removable contamination, a report shall be filed with the U. S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within five days of the date the leak test result is known with the appropriate U. S. Nuclear Regulatory Commission, Regional Office referenced in Appendix D of 10 CFR Part 20. The report shall specify the source involved, the test results, and corrective action taken.
- E. Tests for leakage and/or contamination shall be performed by persons specifically licensed by the U. S. Nuclear Regulatory Commission or an Agreement State to perform such services. In addition, the licensee is authorized to collect leak test samples but not perform the analysis; analysis of leak test samples must be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
- F. Records of leak test results shall be kept in units of microcuries and shall be maintained for three years.

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License No.  
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Docket No.  
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- 13. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the U. S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- 14. The licensee shall conduct a physical inventory every six months to account for all sources and/or devices received and possessed under the license.
- 15. The licensee may transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."
- 16. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the maximum limit specified in 10 CFR 30.35(d) for establishing decommissioning financial assurance.
- 17. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
  - A. Application dated July 10, 2003
  - B. Letter dated August 20, 2003 [fax re: add'l info re: user training]



FOR THE U. S. NUCLEAR REGULATORY COMMISSION

Date SEP 09 2003

By

*Bryan A. Parker*  
 Bryan A. Parker  
 Region II, Division of Nuclear Materials Safety  
 61 Forsyth Street, S.W., Suite 23T85  
 Atlanta, Georgia 30303-8931

*Bryan A Parker*  
*404-562-4728*

# Certificate of Training

Awarded To

*Todd Adkins*

Recognizing completion of 5 days of specialized instruction in

## Radiation Safety Officer with DOT Option

May 18, 2007

Presented By

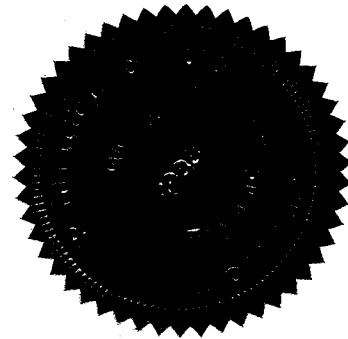
*Radiation Safety Academy*

481 North Frederick Avenue, Suite 302  
Gaithersburg, Maryland 20877

ABIH has awarded this course 5.0 CM Points, CM Approval # 07-552



Raymond Johnson, MS, PE, FHPS, CHP  
Academy Director



# Certificate of Training

This Certifies That

***Todd Adkins***

has been trained, tested and successfully completed specialized instruction in

## **DOT & NRC Requirements for Shipping and Receiving Radioactive Materials**

**May 18, 2007**

Presented By: **Sean M. Austin, Instructor**

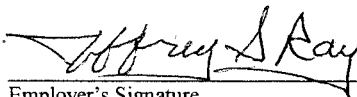
***Radiation Safety Academy***

481 North Frederick Avenue, Suite 302, Gaithersburg, Maryland 20877  
www.RadiationSafetyAcademy.com -- 301-990-6006

Presented For: **Northrop Grumman Corporation**

Presented At: **Gaithersburg, MD**

This certifies that the employee named on this certificate has been trained and tested in accordance with the training requirements of 49 CFR, Subpart H.



Employer's Signature

This certificate is valid for 24 months for ICAO/IATA and for three years for U.S. Department of Transportation and U.S. Nuclear Regulatory Commission or Agreement State Agencies.



Sean Austin, MS, RSO, CHP  
Senior Health Physicist

# TODD DOUGLAS ADKINS

12900 Federal Systems Park Drive (FP14166H) • Fairfax, VA 22033 • [todd.adkins@ngc.com](mailto:todd.adkins@ngc.com) • 703.968.1145

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## ELECTRICAL ENGINEER

Senior level electrical / integration engineer with 14+ years of experience in the design, development and integration of complex real-time and non-real-time hardware systems for various operations including but not limited to Department of Defense (DOD) C4ISR systems. Engineering experience covers a full range from concepts and proposals, scheduling, team management, design and development, to installation, and acceptance testing focused on the development of, computer, radio, sensor hardware integration, and the development of "Fly Away kits". Four years experience in the U.S. Army working with high ranking military and civilian personnel (General Officers) in support of a mobile secure communications team that traveled world wide in support of the Supreme Allied Commander Europe General John R. Galvin. This position utilized all methods of secure and non-secure DOD communications equipment.

### Core competencies and Technical Abilities include...

- C and Visual C++
  - Visual Basic
  - Java
  - Solid Works CAD/CAM
  - Oracle PL /SQL
  - Perforce CM Tool
  - UNIX Fundamentals
  - Microcontroller Design
  - Fly Away Kit Design
  - PCB Design using P-SPICE
  - Data Network Design
  - System Design
  - Systems Analysis
  - Invention and Development
  - Risk Management
  - Requirements Development
  - Cost Modeling
  - Requirements Tracking
  - Systems Engineering
  - Personal Management
  - Quality Management (ISO)
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## EDUCATION

**Master of Science in Communications Technology** (*in progress*) – STRAYER UNIVERSITY  
**Bachelor of Science in Computer Information Systems** (2005) – STRAYER UNIVERSITY  
**Undergraduate Studies in Electrical Engineering** (1997-2001) – PELLISSIPPI STATE  
**Undergraduate Studies in Electrical Engineering** (1994 – 1995) NORTHERN KENTUCKY UNIVERSITY  
**Aviation Science** (1994) – AEROTECH AVIATION ACADEMY  
**Electronic Technician** (1988) – UNITED STATES ARMY SIGNAL CENTER FORT GORDON GEORGIA

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## LICENSES

Commercial Pilot, Single and Multiengine Land  
Certified Flight Instructor  
US DOD Licensed Light Armored Vehicle Operator  
Commercial Drivers Licenses

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## EMPLOYMENT HISTORY

Northrop Grumman Mission Systems (Formerly TRW)	2004 – Present
Sytex Inc	2004 – 2004
CACI Technologies	2001 – 2004
Freelance Flight Instructor	1999 – Present
Turtle Mountain Communications (presently- Sierra Nevada Corp)	1996 – 2001
CHW Construction	1991 – 1996
United States Army	1987 – 1991

**PROFESSIONAL EXPERIENCE**

**Northrop Grumman, Electrical Engineer / Analyst (Formerly TRW)**

Electrical Engineer (November 2004 – Present)

- Responsible for design, develop, and integrate hardware into HMMWV and LAV vehicles.
- Worked with Configuration Management (CM) using CM tools i.e. Perforce.
- Managed hardware baseline.
- Confirmed conformity to ANSI / IEEE, and MIL standards.
- Responsible for field support activities at various test sites nation wide.
- Responsible for development of computer hardware.
- Managed and or conducted hardware component analysis.
- Collaborated with system engineering for full life-cycle support.
- Responsible for manufacturing of cables for test bed configuration and research development.
- Managed hardware integration through various means including the Versa Module Euro card (VME).
- Support of proposal / red team for LAV-C2.
- Responsible for configuration of all radio's to support testing including the appropriate software utilized for this purpose i.e. EPLRS, SINCGARS, PRC-117, PRC-150 etc.
- Responsible for drawings using, Solid Works and Visio to support deliverable equipment and CM.
- Responsible for establishing requirements documentation such as Form and Fit analysis, and SPS development.
- Responsible for circuit designs / circuit card designs.
- Work closely with customers and project manager to optimize the functionality and integration of the communication suite.

**Sytex Inc, Senior Associate / Electrical Engineer Analyst**

Senior Associate (April 2004 – Present)

- Managed Quality Assurance to facilitate test procedures.
- Responsible for producing technical data packages.
- Oversaw Configuration Management (CM).
- Responsible for conformity to ANSI / IEEE, and MIL standards.
- Responsible for drawings using Visio to support deliverable equipment and CM.
- Responsible for research for design purposes.
- Collaborated with PM to establish requirements documentation.

**CACI Technologies, Inc, Advanced Technologies Division**

Engineer Analyst (November 2001 – April 2004)

NBCDACS Program NBC Reconnaissance Vehicle (NBCRV)

- Designed various subassemblies used within the NBCRV vehicle.
- Designed complex PCB-based circuits for the purpose of EMI / RFI and HEMP circumvention and filtering.
- Lead the design of test fixtures to support test procedures and to validate various sub systems within the NBCRV.
- Collaborated with software engineers for design and implementing of lab configuration for system development.
- Responsible for procurement of parts data used in producing technical data packages.
- Responsible for establishing requirements documentation for all, but not limited to, purchasing and deliverable drawing package.
- Responsible for the arrangement and scheduling of shipments.
- Responsible for system architecture including, but not restricted to, integration of internal cabling to and from multiple types of internal circuit cards to various serial peripherals and discrete I/O devices.
- Established CACI as a subject matter expert on all sensor systems integration issues which has led to field service representation contracts in areas, which expands the original scope of CACI's involvement in NBCRV.



## **Todd Douglas Adkins – Page 3**

NBC Joint Services Light, Nuclear, Biological, and Chemical Reconnaissance System (JSLNBCRS):

- Responsible for modification of VME framework for environmental cooling and power production.
- Collaborated with vendor to redesign and or modify the VME to support LUT testing at Dugway Proving Grounds.
- Provided on site support and made changes to cable assemblies and supporting hardware.
- Provided field support to Northrop Grumman, which aided in a contract being awarded.

### **Freelance Flight Instructor**

FAA Certified Flight Instruct (August 1999 – Present)

Provide flight, simulator, and ground instruction in accordance with FAA regulations and procedures. Prepare schedules, maintain records, and ensure that each student in each flight course meets course standards, training requirements, and objectives.

- Ensure all students understand and practice all aspects of Aviation Safety Program.
- Responsible for accurately maintaining all appropriate records to include student-training record, student logbook, and computer records in accordance with FAA guidelines.
- Ensure that course standards, training requirements, and objectives are met by all assigned students as stipulated in the applicable Training Course.
- Responsible for the timely course completion of all flight students, including completion of required paperwork.
- Aircraft piloting skills, including familiarity with and ability to perform required flight maneuvers and procedures.
- Knowledge of and ability to apply effective instructional technique in the classroom and in flight.
- Knowledge of appropriate Federal Aviation Regulations as it relates to, operational procedures and requirements.
- Ability to work well under pressure in fast-paced and noisy environment while exercising sound judgment at all times.

### **Turtle Mountain Communications (presently-Sierra Nevada Corporation)**

Program Manager and Chief Engineer (April 1996 – November 2001)

- Responsible for the design of all systems at Turtle Mountain Communications between 1998 to 2001.
- Designed flyaway kits for electronic military grade communication equipment.
- Program Manager of all programs from 1998 to 2001 with a maximum of 24 million in sales revenue in the year 2000.
- Supervised in excess of 20 personnel.
- Established a “Just in Time” inventory (JIT) that lead to significant overall cost savings.
- In the effort of commonality designed one power control board to be utilized in all systems, in essence saving company in excess of \$80K in 1998 and significantly increased troubleshooting and productivity rates.
- Through the use of Total Quality Management (TQM) I Developed and implemented an analysis system of tracking all projects. This system was used on a global scale that revolutionized the accounting, management, productivity, procurement, sales, shipping / receiving, and quality assurance structure of Turtle Mountain Communications, and later lead to 30% reduction in meetings and overhead support activities.
- Worked closely with vendors to maximize cost savings and whereby establishing a “just in time” inventory.
- Responsible for the design of wireless mobile communication devices using military communications equipment.
- Responsible for the integration of military equipment such as, but not limited to, PSC/5, SINCGAR, EPLARS, LST/5, RF5000, PRC/117, PRC/138 and various supporting peripherals to include military amplifiers.
- Other duties included in the development of designs were:
  - Designed and development of power supplies, both AC/DC.
  - Video conferencing systems (RF and hard line, microwave equipment for transmission of full motion video, and verifying power supply specification).
  - Systems trainer to INSCOM (worldwide).

## **Todd Douglas Adkins – Page 4**

### **United States Army**

Electronic Technician (October 1987 – October 1991)

Electronic Warfare Technician Repairman Course, were the below curriculum was covered.

- Basic Electronic Principles: Vacuum Tubes and Solid-State Devices
- Basic Electronic Circuits: Amplifiers, Oscillators, Counters, Registers, Clocks, Memory, Synchronization, Alarm, Modulation circuits.
- Basic Digital Circuits: DTL, TTL, ECL, LED's, ROM and CMOS applications.
- Basic Computer Mathematics: Decimal, Binary, Octal, Hexadecimal number systems,
- Truth & Logic
- Tables, Boolean Algebra.
- Specialized Electronic Circuits: Voice & Data Encryption, PCM coder/decoders, Bi-Stable
- Ferro-magnetic Switching devices, Key Generation circuits.

Attended a cryptographic repairman course consisted of a 36 week training that focused on the repair and maintenance of TSEC/KY-3, KG27, KG30 family, KIR1A/KIT1A, HN1, KW7, KG84, KY57/58, KY65/75, KG81/TRITAC family, ST34, ST58, USM481, and others.

All military training courses consist of 8 hours a day 5 days a week “fast paced training”.

Served in Belgium, for General John R Galvin

- Technician for the Supreme Headquarters Allied Powers Europe (SHAPE and or NATO Headquarters).
- Traveled worldwide for secure communication equipment installation and support of SACEUR General John R. Galvin, were I interfaced daily with high-ranking military and governmental officials, and occasionally some royal families (i.e. Dukes, Kings and Queens).
- Demonstrated high proficiency of technical expertise through close communications with high-ranking Government and Military officials.

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### **PROFESSIONAL DEVELOPMENT**

Quality Management (ISO 9001) ▪ Performance Management ▪ Project Management ▪ Activity Based Costing Management ▪ Leadership Training ▪ Business Problem Solving ▪ IT Security Awareness ▪ Diversity Training ▪ Team Building ▪ Ethics Training ▪ Total Quality Management (TQM)

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### **SECURITY CLEARANCE**

TOP SECRET

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### **MEMBERSHIPS**

Industrial Electronic Engineers (IEE)  
Association of the United States Army (AUSA)  
Armed Forces Communications and Electronics Association (AFCEA)  
Aircraft Owners and Pilots Association (AOPA)

This is to acknowledge the receipt of your letter/application dated

6/8/2007, and to inform you that the initial processing which includes an administrative review has been performed.

AMCNO. 45-25631-d  
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

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

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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 140649.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)  
(6-98)

Sincerely,  
Licensing Assistance Team Leader