

CURRICULUM VITAE**Donald L. Haes, Jr., Ph.D., CHP [†], CLSO [‡]***Radiation Safety Specialist*

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[†] Board Certified by the American Board of Health Physics 1994; renewed 1998, 2002, 2006, 2010, 2014, 2018 (exp 12/31/2022).[‡] Board Certified by the Board of Laser Safety 2008; renewed 2011, 2014, 2017 (exp 12/31/2020).**Academic Training -**

- Ph.D. in Radiation Protection, 04/2000; MS in Radiological Sciences and Protection, 05/1988; BS in Health Physics, 06/1987.
- Naval Nuclear Prototype Training Unit, Knolls Atomic Power Laboratory, Windsor, Connecticut, 01-09/1977. Qualification - Nuclear Reactor Plant Mechanical Operator and Engineering Laboratory Technician (MO/ELT).
- Naval Nuclear Power School, 06-12/1976.

Continuing Education –

- *Profession Enrichment Program [PEP], American Academy of Health Physics:*

07/2019; Orlando, FL	07/2006, Providence, RI	06/1999, Phil, PA
07/2017, Raleigh, NC	07/2005, Spokane, WA	07/1998, Mpls, MN
07/2015, Indy, IN	02/2005, N Orleans, LA	06/1997, S Ant, TX
07/2014, Balt, MD	07/2004, Wash, DC	07/1995, Boston, MA
07/2013, Mad, WI (chair)	02/2004, Augusta, GA (chair)	07/1994; San Fran, CA
06/2011, P Beach, FL	07/2003, San Diego, CA	07/1993; Atlanta, GA
06/2010, SL City, UT	01/2003, San Ant, TX	06/1990; Anaheim, CA
07/2009, Mpls, MN	02/2002, Orlando, FL	07/1988; Boston, MA
07/2008, Pittsburgh, PA	06/2001, Cleveland, OH	07/1984; New Orleans, LA
07/2007, Portland, OR	06/2000, Denver, CO	
- *OSHA 511 General Industry; May 22-25 2017; Manchester, NH.*
- *FLAAPM Joint Workshop; November 13, 2015; Sarasota, FL; Lecturer and attendee.*
- *NASA 2 Day RF Safety Seminar; September 17-18, 2015; Webinar Lecturer.*
- *Annual DOE LSO Workshops; Lecturer and attendee.*
- *Laser Safety Officer With Hazard Analysis; LIA Inc.; November 03-07, 2008; Boston, MA*
- *Laser Safety Officer Training; Laser-Professionals Inc.; November 01-04, 2006; Austin, TX.*
- *Prepare for and Pass the ABHP Exam; TMS, Inc.; March 07-11, 1994; New Orleans, LA.*
- *EPRI Power System Magnetic Field Measurement Workshop; Conducted by G.E. Company at the High Voltage Transmission Research Center, April 13-16, 1992; Lenox, MA*
- *Advanced Laser Safety; Engineering Technology Institute, March 02-06, 1992; Waco, TX.*
- *Laser Safety; Engineering Technology Institute, June 10-14, 1991; Woburn, MA.*
- *Non-ionizing Radiations: Health Physics & Radiation Protection; MIT, July 23-27, 1990; Cambridge, MA; Lecturer and attendee.*
- *Assessing Non-Ionizing Radiation Hazards; 1990 Health Physics Society Summer School, June 17-22, 1990; Fullerton, CA.*
- *Certification Review for HPs; Skrable Enterprises, Inc; March 19-24, 1989; Nashua, NH.*
- *Hazardous RF Electromagnetic Radiation: Evaluation, Control, Effects, and Standards; George Washington University, November 02-04, 1988; Washington, DC.*

Employment History -

- Consulting Health Physicist; Ionizing/Nonionizing Radiation, 1988 - present.
 - **See Attached list of clients.**
- Radiation, RF and Laser Safety Officer; BAE Systems, 2005–2018 (retired 9/2018).
- Assistant Radiation Safety Officer; MIT, 1988 – 2005 (retired).
- Radiopharmaceutical Production Supervisor - DuPont/NEN, 1981 – 1988 (retired).
- United States Navy; Nuclear Power Qualifications, 1975 - 1981.

Professional Societies -

- Health Physics Society [HPS].
 - American Academy of Health Physics [AAHP]
 - Part II Panel of Examiners, 2001-2006; 2010-2015.
 - National Chapter:
 - HPS Journal peer reviewer, Completed 7 reviews on *Non-Ionizing Radiation*.
 - Non-Ionizing Radiation Section: **Secretary/Treasurer**; 2014-2018.
 - New England Chapter [NECHPS].
- Institute of Electrical and Electronics Engineers [IEEE];
 - Standards Association [SA] voting member.
 - International Committee on Electromagnetic Safety [ICES] (ANSI C95 series).
 - Technical Committee 95 [TC95].
 - Subcommittee SC-2 {**Vice Chair**}: Terminology and Units of Measurement.
 - SC-3/4: Safety Levels With Respect to Human Exposure, 0-300 GHz.
- Laser Institute of America [LIA].
 - Board of Laser Safety [BLS]; Board of Commissioners; 2011-2018.
 - **Secretary/Treasurer**; 2018-present.
 - American National Standards Institute Accredited Standards Committee (ASC Z136).
 - SSC-1: Safe Use of Lasers.
 - SSC-6: Safe Use of Lasers Outdoors.
 - SSC-8 Safe Use of Lasers in Research, Development & Testing.
 - TSC5 {**Vice Chair**}: Technical Scientific Committee on *Non-Beam Hazards*
- Committee on Man and Radiation [COMAR].
 - Contributing member; 2014-present.
 - **Secretary/ADCOM member**; 2018-present.

Pertinent Publications -

- **Haes, D.L.**; *Subjugating Technical Imperfections in the Composition of Wireless Cellular Telephone Radio-frequency [RF] Environmental Assessments*. Dissertation for Ph.D.; 2000.
- **Haes, D.L.**, McCunney, R. (ed); *Medical Center Occupational Health & Safety*. Chap 14 Nonionizing Radiation Including Lasers, pp. 219-230. Lippincott Williams & Wilkins, Philadelphia, 1999.
- **Haes, D.L.**, Galanek, M, DiBerardinis, L. (ed); *Handbook of Occupational Safety and Health*. Chap 24 Radiation: Nonionizing & Ionizing Sources, 987-1016. John Wiley & Sons, Inc., 1999.
- **Haes, D.L.**, Fitzgerald, M.F.; VDT VLF Measurements: The Need for Protocols in Assessing VDT User "Dose". *Health Physics*, 68(4), 572-578, 1995.
- Ducatman, A., **Haes, D.L.**; *Textbook of Clinical Occupational and Environmental Medicine*. Chap 23 Nonionizing Radiation, 646-657. W.B. Saunders Company, 1993.
- **Haes, D.L.**; ELF Magnetic Field Measurements: Units of bedlam. *Health Physics*, 63(5), 591, 1992.

- **Haes, D.L.;** VDT _Radiation_ Protection Products - Protection or Pacification? *Health Physics Newsletter*, Vol XIX, No 12, 19-21, December 1991.
- **Haes, D.L.;** Are VDTs Safe? *Information Display*, Vol 7, No 6, 17-27, June 1991.
- Heath Physics Society **Ask the Expert:** Contributing expert, non-ionizing radiation.

Standards Setting Organizations Involvement: Cited as Author and/or Reviewer -

- **ANSI® Z136.1 – 2014:** *American National Standard for Safe Use of Lasers*
- **ANSI® Z136.2–2012:** *American National Standard for Safe Use of Optical Fiber Communication Systems Utilizing Laser Diode and LED Sources*
- **ANSI® Z136.3–2017:** *American National Standard for Safe Use of Lasers in Health Care*
- **ANSI® Z136.6 – 2015:** *American National Standard for Safe Use of Lasers Outdoors*
- **ANSI® Z136.8–2012:** *American National Standard for Safe Use of Lasers in Research, Development, or Testing*
- **ANSI® Z136.9 – 2013:** *American National Standard for Safe Use of Lasers in manufacturing Environments*
- **IEEE Std C95.1™-2019 (Revision of IEEE Std C95.1™-2005):** *IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 0 to 300 GHz*
- **IEEE PC95.1a™-2010:** *Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz—Amendment 1: Specifies Ceiling Limits for Induced and Contact Current, Clarifies Distinctions between Localized Exposure and Spatial Peak Power Density*
- **IEEE PC95.1-2345™-2013:** *Standard for Military Workplaces - Force Health Protection Regarding Personnel Exposure to Electric, Magnetic and Electromagnetic Fields, 0 Hz to 300 GHz*
- **IEEE Std C95.2™-2018:** *IEEE Standard for Radio-Frequency Energy and Current-Flow Symbols*
- **IEEE Std C95.4™-2002:** *IEEE Recommended Practice for Determining Safe Distances from Radio Frequency Transmitting Antennas When Using Electric Blasting Caps During Explosive Operations*
- **IEEE Std C95.6™-2002:** *IEEE Standard for Safety Levels with Respect to Human Exposure to Electromagnetic Fields, 0–3 kHz*
- **IEEE Std C95.7™-2014:** *IEEE Recommended Practice for Radio Frequency Safety Programs, 3 kHz to 300 GHz*

Clients by category:

Academia / Research

Bentley College
Boston College
Boston University
Center for Blood Research
Harvard University
MIT
New England College of
Optometry
Tufts University
University of Connecticut
University of Massachusetts
University of Texas
Woods Hole Oceanographic
Institute

Bio-Tech

Alpha Gene
BioGen
Broad Institute
Cell Signaling Technology
CytoMed
Enzytech
Ergo Sciences
Genetics Institute
Genzyme
NeoGenesis
Osteo Arthritis Sciences
Peptimed
Peptimune
Procept
ProScript
Weyth

Government Organizations & Services

City of Peabody, MA DPH
City of Quincy, MA DPH
City of Watertown, MA DPH
Malden, MA Fire Department
Massachusetts State Police
Massachusetts Radiation
Control Program
NASA
Swampscott, MA Police & Fire
Departments
Town of Stoneham, MA
Town of Winchester, MA
USAF
USN
Wellesley Municipal Light Plant

Worcester Housing Authority City/Town Permitting Boards

Candia, NH
Duxbury, MA
Edgartown, MA
Freeport, ME
Foxborough, MA
Lancaster, MA
Lincoln, MA
Maynard, MA
North Andover, MA
Needham, MA
Newington, CT
Reading, MA
Stoneham, MA
Tewksbury, MA
Winchester, MA

Consulting/Law

Amec Foster Wheeler
Anderson & Kreiger
Arthur D. Little
Atlantic Western
Bailey Associates
D.L. Haes, Sr.
DRM PLC
Duval & Klasnick LLC
Environmental Heath &
Engineering
Environmental Training
Foundations Partners (NYC,NY)
F.X. Massé Associates
Gehring Associates
GOPower Inc.
Hunter Inc.
J. Lee Consulting
Kilpatrick,Townsend & Stockton
MOD Data Tech Inc.
Network Building & Consulting
Network Development
Consulting
S.B.A.
SeaCoast LLP
Tectonics
Terracord LLC
Wenstrup Consulting
Wireless Facilities

Health Care

Addison Gilbert Hospital
Dana Farber Cancer Institute

Fallon Clinic
Health Resources
MDPH Lead Lab
Merrimack Valley Hospital
New England Medical Center
Rhode Island Hospital
St. Vincent's Hospital
Tufts Medical Center
Worcester Medical Center

Industry

Agilent Technologies
American Holographic
American Saw
Analog Devices
Anthony's Building Company
ASML
BAE Systems
Becton-Dickenson
Channel Fish Co.
Compugraphics
Draper Laboratory
Display Components
DuPont/NEN Products
Federal-Mogul
Focal
Gillette
GTE Products
Harris
Hewlett Packard
Ingold
Innovative Systems Group, Inc.
KARL STORZ Endovision, Inc.
Kopin
Kraft General Foods
Landis + Gyr
Lockheed Martin
Loral Microwave
Lucent Technologies
Mettler-Toledo
MicroVision, Inc.
MIT Lincoln Laboratory
MRM, Inc.
Muro Pharmaceutical
Narda
Northrop
Osram-Sylvania
Phasex
Philips Medical Systems
Polaroid
Portsmouth Naval Shipyard

Questek
Sanofi Pasteur
Senior Flexonics
Skyworks
Spire
SVG Lithography
The Money Store
Varian
Visidine
W.R. Grace
Wearguard
Wyman-Gordon

Wireless/Broadcast/Paging

5-State Tower
Airosmith Development
American Tower Co.
American Tower Corp.
AT&T Wireless
Bay Communications
Berkshire Wireless
Blue Sky Towers LLC
Centerline Communications LLC
Cingular Wireless
Clear Wire, LLC
Cricket Communications

Crown Castle International
Direct Network Services
DRT Enterprises
Edge Wireless
Empire Telecom
Extenet
FiberTower
General Dynamics Network
Systems, Inc.
Independent Wireless One
Industrial Communications
Infinigy Engineering
Light Squared
Lighttower
MetroPCS
Mid-Hudson Communications
Mobilite
Network Building + Consulting
Nexius
Nextel Communications
Northeast Paging/UCOM
NE Wireless Services, LLC
Northern Telecom
NY Cellular
OmniPoint Communications
Pyramid Network Services

RCC
SAI Communications
Smartlink
Sprint PCS
Telecorp
Telegent
T-Mobile
Tower Resource Management
Ultranet
US Cellular
Varsity Wireless
Verizon Wireless
Vermont Public Radio
Vermont Public Television
Vertical Bridge
Videolink TV
Voice Stream
Wireless Edge Towers
WCVB-TV
WEBK-FM
WFLY-TV
WGNA-TV
WIZN-FM
WMHT-TV
WPYX-FM
WVPS-FM

Localities for RF Environmental Assessments, Field Measurements, and/or Public Testimony:

Colorado

Englewood
Littleton
Thornton

Connecticut

Avon
East Hartford
Guilford
Hartford
Middletown
Putnam
Stamford
Westerly

Florida

Miami

Maine

Augusta
Baldwin
Cornish
Fort Kent
Freeport
Newburgh
Orono
Poland
Portland
Standish
Tremont
Winthrop

Massachusetts

Abington
Acton
Amesbury
Amherst
Andover
Arlington
Ashland
Athol
Attleboro
Auburn
Avon
Barnstable
Barre
Bedford
Bellingham
Belmont
Billerica

Boston
Bourne
Boxborough
Boylston
Braintree
Bridgewater
Brimfield
Brockton
Brookline
Brookline Village
Burlington
Cambridge
Canton
Carver
Charlestown
Charlton
Chelmsford
Chelsea
Cheshire
Chester
Chestnut Hill
Cohasset
Concord
Cotuit
Cummington
Dalton
Danvers
Dartmouth
Dedham
Deerfield
Deer Island
Dighton
Dorchester
Douglas
Dover
Dracut
Dudley
Dunstable
Duxbury
East Bridgewater
East Fairhaven
Eastham
Easton
Edgartown
Everett
Exeter
Fairhaven
Fall River

Falmouth
Foxborough
Framingham
Franklin
Freetown
Georgetown
Gill
Gloucester
Grafton
Great Barrington
Greenfield
Groveland
Hamden
Hamilton
Hanover
Harvard
Haverhill
Hingham
Holbrook
Holden
Holliston
Hopkinton
Hudson
Hull
Huntington
Hyannis
Ipswich
Jamaicaway
Kingston
Lakeville
Lancaster
Lanesborough
Lawrence
Leominster
Lexington
Leverette
Lincoln
Littleton
Longmeadow
Lowell
Lunenburg
Lynn
Lynnfield
Malden
Manchester-by-the Sea
Mansfield
Marblehead
Marlborough

Marshfield
Marston Mills
Martha's Vineyard
Mattapan
Maynard
Medfield
Medway
Melrose
Mendon
Methuen
Middleboro
Millis
Milton
Monson
Montague
Montgomery
Mount Herman
Nahant
Nantucket
Natick
Needham
New Bedford
Newburyport
Newton Centre
Newton
North Andover
North Easton
North Reading
Northampton
Northborough
Northbridge
Norton
Norwell
Orleans
Oxford
Paxton
Pembroke
Pepperell
Plympton
Princeton
Provincetown
Quincy
Randolph
Reading
Rehoboth
Revere
Rochester
Rockland
Rockport

Roslindale
Rowley
Roxbury
Rutland
Salem
Salisbury
Sandwich
Saugus
Savoy
Seekonk
Scituate
Sharon
Shelburne
Sherborn
Shrewsbury
Somerset
Somerville
Southborough
South Hadley
Stoneham
Stow
Sturbridge
Sudbury
Sutton
Swampscott
Taunton
Templeton
Tewksbury
Tolland
Topsfield
Townsend
Truro
Turner Falls
Tyngsborough
Upton
Vineyard Haven
Wakefield
Walpole
Waltham
Warren
Watertown
Wayland
Wellesley
Wellfleet
Wenham
West Medford
West Peabody
West Roxbury
West Tisbury

West Boylston
Westborough
Westford
Weston
Westwood
Weymouth
Whitman
Wilbraham
Wilmington
Winchester
Windsor
Woburn
Wolfeboro
Woods Hole
Worcester
Wrentham

New Hampshire

Albany
Amherst
Antrim
Ashland
Auburn
Belmont
Bedford
Bow
Candia
Canterbury
Chesterfield
Claremont
Concord
Cornish
Danbury
Dartmouth
Deerfield
Deering
Derry
Dublin
Effingham
Epsom
Exeter
Fitzwilliam
Franconia
Gilmanton
Goffstown
Greenfield
Hanover
Hooksett
Hopkinton
Hudson

Jackson
Keene
Kingston
Lebanon
Lee
Londonderry
Madison
Merrimack
Milton
Mont Vernon
Moultonborough
Nashua
New Boston
Newbury
New Hampton
Newington
Newmarket
Northfield
North Hampton
Pelham
Pembroke
Portsmouth
Rochester
Salem
Sandwich
Seabrook
Spofford
Troy
Wakefield
Warner
Weare
Webster
Wilmot
Winchester
Windham
Wolfeboro

New Jersey

Alpine

New York

Antwerp
Barneveld
Buffalo

Clifton Park
Conewango
Darien Center
Deposit
East Syracuse
Glencove
Goshen
Harpurville
Honeoye
Lake Placid
Lindley
Lockport
Macedon
Malone
Marbletown
Middleton
New York City
Olean
Oneida
Pavilion
Pearl River
Penfield
Philadelphia
Pittsford
Port Crane
Rochester
Rome
Rye Brook
Sand Lake
Smethport
Sodus
Spencerport
Syracuse
Troy
Tupper Lake
Vestal
Yonkers
Watertown
Webster
West Sand Lake
Wolcott

Pennsylvania

Caroline

Lansdale
Philadelphia

Rhode Island

Barrington
Block Island
Burrillville
Bristol
Charlestown
Chepachet
Coventry
Cranston
East Greenwich
Exeter
Foster
Glocester
Hopkinton
Jamestown
Johnston
Lincoln
Marieville
Middletown
Newport
North Providence
Pawtucket
Perryville
Portsmouth
Providence
Richmond
Riverside
Smithfield
Tiverton
Warwick
West Greenwich
West Warwick
Woonsocket

Vermont

Burlington
Charlotte
Killington
Stowe
West Windsor
Windsor