



Mission

To provide the most complete and technically competent health physics, medical physics, and radiological health engineering solutions for our clientele

Core Competencies

Health Physics and Radiation Protection
Radiological Health Engineering
Environmental Assessment
Radiological Assessment
Training and Education
Medical Physics



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[Introduction to Foxfire Scientific](#)

Foxfire Scientific, Inc. is a veteran-owned small business dedicated to providing clients with comprehensive health physics, medical physics, and radiological health engineering solutions of the highest quality. Foxfire Scientific's cohesive, focused group of scientists and engineers possesses a collective 100+ person-years of health physics experience, and hails from such diverse backgrounds as the military, US Department of Energy, industry, and academia. With our highly qualified staff, technical reviewers, board certified professionals, and teaming partners, Foxfire Scientific has the depth of resources necessary to meet any client need across the health physics, medical physics, and radiological health engineering disciplines.

Foxfire Scientific, Inc. has enjoyed consistent growth since its incorporation in 1999 on a framework of specialized, senior-level services in health physics and litigation support. With offices in Arlington (the Dallas/Fort Worth area), Austin, Houston and San Antonio, we conduct business within the United States and abroad, reaching new markets, and expanding our capabilities. Such growth allows us to continually increase the scope of projects we undertake and the expertise of our team members.

At Foxfire Scientific, our goal is to provide the most complete, technically competent and legally defensible support of our client's needs, while maintaining a cost conscious approach to project management that guarantees our clients get the most for their investment — that is our idea of value. We also believe in fostering excellent client-consultant relationships, and thus strive to exceed client expectations in every way possible. We provide this essential, cost effective project- and task-specific support with our experienced, professional staff and cadre of nationally/internationally renowned teaming partners, all well-recognized scientists and engineers in their respective disciplines.

[The Foxfire Team](#)

Our employees are selected because of their proven performance and expertise. The professionalism each of our team members brings to Foxfire Scientific parallels our corporate philosophy of service and excellence. Our professionals are experienced in radiation protection, risk management, and litigation support. With the experience our project managers possess, we can navigate many of the complex issues surrounding regulatory, community, and environmental concerns. This enables us to provide rapid client support, and to work with minimal oversight.

The company founder and President is Dr. Ian Hamilton. He is a Certified Health Physicist (CHP) and Certified Medical Physicist (DABR-D). He started his career serving as a nuclear technician in the US Navy aboard a ballistic missile submarine. Over the subsequent 20+ years of experience in reactor operations, applied and theoretical health physics, and general safety, he has been the Laboratory Manager, Assistant Professor, and Health Physics Program Director for the Texas A&M University, Department of Nuclear Engineering; Associate Professor of

Radiologic Science and Director, Consulting Medical Physics Practice, for the Baylor College of Medicine, Department of Radiology; and President and Chief Operating Officer, Foxfire Scientific, Inc. During the same time, he has served as head of the Work Area on Health and Safety, Amarillo National Resource Center for Plutonium, and as Vice Chair of the governor-appointed Texas Radiation Advisory Board (TRAB), which advises Texas regulatory agencies regarding radiation regulations and policy. Dr. Hamilton specializes in health physics and radiological assessment, medical physics, litigation support, and education and training.

The Foxfire Scientific Vice-President is Dr. Matthew Arno. He is a licensed Professional Engineer and also a CHP. He has worked in the US Department of Energy uranium fuel cycle complex, and served as a Visiting Assistant Professor for the Texas A&M Nuclear Engineering Department. He joined Foxfire Scientific in 2000 and has over 15 years experience with nuclear criticality safety, accident analysis, safety analysis, licensing and regulatory support, training, environmental assessment & remediation, and dose assessment. Dr. Arno specializes in environmental remediation, dose assessment, and radiation safety program development.

Mr. Donald Halter, MS, is a Senior Health Physicist for Foxfire Scientific. Prior to his tenure with Foxfire Scientific, Mr. Halter was responsible for implementing and managing portions of the radioactive materials broadscope license and radiation and laser safety program for the Texas A&M University System (main campus and satellite campuses throughout the state). He has over 10 years of experience with radiation safety program implementation, training, waste management, and dose assessment. He is presently finishing his PhD in plutonium biochemistry. Mr. Halter specializes in waste management, radiation safety program development & implementation, and licensing/regulatory support.

Mr. Stephen Gilliland, MS, is a Senior Medical Physicist for Foxfire Scientific. Mr. Gilliland came to join Foxfire Scientific in 2006 from Phoenix Technology Corporation, a private medical physics consulting firm. Prior to that, he was the Staff Physicist for Theragenics Corporation, a radiological medical device-manufacturing company. Mr. Gilliland currently specializes in the evaluation of diagnostic imaging systems, structural shielding evaluation for medical imaging facilities, patient, public and fetal dose assessment, image quality optimization, as well as regulatory and general quality assurance consultation in the area of diagnostic imaging physics. Additionally, he has experience in applied radiation detection and measurement including gamma spectroscopy and medical source characterization.

Foxfire Scientific, Inc. has other full- and part-time specialists, as well. Foxfire Scientific also has maintains a team of highly specialized scientific and engineering consultants – all subject matter experts whom we work with on specific projects. This group includes Past Presidents of the American Industrial Hygiene Association and Health Physics Society, members and past members of NCRP writing committees etc.

Services

Whether your particular need is for a small-scale survey, or for a team skilled in designing, implementing, and auditing an operational radiation safety and/or environmental monitoring program, Foxfire Scientific can be your “one-stop shop.” We can take the lead on a contracted or subcontracted project at any stage of its development or execution. We serve a clientele with diverse backgrounds, from small hospitals and clinics, to government agencies, to large oil companies. Foxfire Scientific, Inc. can provide teaming and expertise in:

- Health Physics and Radiation Protection
- Environmental Assessment
- Risk Assessment and Communication
- Training and Education
- Radioactive and Mixed Waste Management
- Medical Physics and Radiological Health Engineering
- Litigation Support
- Licensed Professional Engineer Services

HEALTH PHYSICS AND RADIATION PROTECTION

Our staff includes health physicists with extensive experience in operational health physics and radiological health engineering. Foxfire Scientific has developed numerous US 10 CFR 20-compliant (and analogous Agreement State regulations) radiation protection programs. Foxfire Scientific provides a wide array of expertise in many topical areas such as the following:

- Radiation protection program development, auditing, and regulatory compliance
- Dose estimation, including reconstruction or projection
- Risk assessment
- Radiation litigation support
- Nuclear facility safety
- Criticality safety
- Licensing
- Waste management
- Training & education
- External and internal dosimetry monitoring programs
- Design of radiation detection and monitoring systems
- Development and auditing of security controls for radioactive materials
- Laser systems hazards analysis and program management
- Applied health physics consultation
- Health and safety program and training program development and auditing

ENVIRONMENTAL ASSESSMENT

Foxfire Scientific has participated in a number of environmental assessment and remediation projects for a wide range of sites and industries. We have addressed issues arising from Naturally Occurring Radioactive Materials (NORM) and Technologically Enhanced NORM (TENORM) for a number of our clients. Many of our projects have involved the mineral extraction industry, including mining, milling, and petrochemical firms. Our services include:

- Historical site assessments
- Characterization surveys and sampling
- Scoping surveys and sampling
- MARSSIM final status surveys
- Environmental monitoring
- Public dose assessment
- Environmental remediation feasibility studies and work plan development
- Environmental transport pathway analysis

RISK ASSESSMENT & COMMUNICATION

Foxfire Scientific has a broad range of experience in risk assessment and communication of risks concerning radiation and chemical exposures. We have conducted dose and concomitant risk assessments for a variety of exposure scenarios, including: risk to an individual from occupational exposure, risk to off-site members of the public, and risk from long-term environmental contamination. We provide public speaking, as well as, other forms of assistance for public and stakeholder meetings and technical document development. The objective is to communicate and inform interested and/or impacted parties about the contextual meaning of estimated risks in understandable language. We routinely provide risk communication to workers through a variety of our education and training programs, and strive to provide the most up to date, scientifically-sound information available. Through these experiences we have developed capabilities to:

- Perform dose assessments and communicate the findings
- Conduct atmospheric modeling for the transport of radioactive materials
- Conduct environmental transport analysis
- Perform accident analysis to determine credible accident scenarios
- Model and evaluate routine, non-routine and accidental releases
- Conduct retrospective and prospective dose assessments based upon available data and modeling methodology, and
- Conduct planning, oversight, and review of Superfund site environmental remediation projects

In the risk communication, outrage management, and legislative communications areas, Foxfire Scientific, Inc. staff members have considerable experience presenting technical information to a variety of non-technical audiences. This experience ranges from teaching high school science

teachers about radiation sources, effects, and uses to presenting the results of public dose assessments at public meetings under adversarial conditions. It is our belief that even the best science in the world is of no use if its meaning and true impact cannot be communicated. To this end, we always strive to make sure the results of any study we perform are presented, whether in writing or orally, in a clear, concise, and understandable manner. Our past risk communication activities have included:

- Presentation of Science Teacher Workshops to educate secondary school science teachers and students about radiation
- Expert witness written reports and testimony both at deposition and at trial, as well as for the legislature
- Conducting 40-hour Radiation Safety Officer and 4-week Principles of Health Physics training courses
- Explanation of radiation effects and risks at Superfund site Public and Technical Working Group meetings

TRAINING & EDUCATION

Education is always the first step toward success in any field. At Foxfire Scientific, we believe that to be effective leaders in our profession, as well as in our community, we must continually strive to educate ourselves and others. In fact, some of our staff members hold concurrent positions as faculty at major universities and medical schools. We have worked with local authorities, educational institutions, and professional organizations and businesses to provide short courses and seminars that confer the necessary education and hands-on training concerning radiation protection, best management practices, and related medical physics and health physics topics. We are skilled in teaching difficult radiation concepts to adult learners. Our training provides attendees with the tools necessary to handle the obstacles that are part of the everyday radiation workplace. If you have a radiation health-related education and/or training need Foxfire Scientific can meet it. Many of our courses can be used to obtain continuing education credits, as well.

Examples of courses and seminars include:

- Principles of Health Physics Four-Week Professional Academy
- Internal Dose Assessment and Related Principles of Whole Body Counting (5 days)
- Management of Terrorist Events Involving the Use of Radioactive Materials (1 day)
- Radiation Safety Officer 40-Hour Short Course (5 days)
- Magnetic Resonance Imaging: Where it is and Where it is Going (1 day)
- Basic Counting Statistics (2 days)
- Principles of Radiation Detection and Measurement (5 days)
- First responder training (1 day)
- Radiation 101 (1, 4, or 8 hours)

RADIOACTIVE AND MIXED WASTE MANAGEMENT

Foxfire Scientific, Inc. offers a wide array of radioactive waste management services. Our staff has experience in all aspects of a waste management program, from limiting production of radioactive and mixed wastes, to characterization and disposal of those wastes:

- Sorting and characterizing waste streams
- Packing and manifesting shipments
- Brokering and Waste disposal
- Obtaining state-specific special waste permits
- Developing written procedures and program development
- Routine waste program management
- Related Waste Management Services

MEDICAL PHYSICS

Foxfire Scientific, Inc. offers a wide array of diagnostic medical physics and medical nuclear physics services to our clients. We specialize in site accreditation by the American College of Radiology (ACR), and Intersocietal Accreditation Commission (IAC), in their respective modalities, including mammography, stereotactic breast biopsy, computed tomography, magnetic resonance imaging (MRI), nuclear medicine and PET, and ultrasound. Whether a facility is maintaining accreditation or is in the process of applying for accreditation for the first time, we can help the imaging department achieve and maintain the highest standard of excellence concerning image quality and patient care. Within the area of diagnostic medical physics, we provide consulting services for the following:

- Diagnostic imaging systems
 - X-ray (incl. portable, dental, and cabinet tubes)
 - Mammography (analog and digital, single- or multi-target)
 - Ultrasound (B-mode, spectral Doppler, color Doppler)
 - Fluoroscopy (incl. C-arms, Endo, Bronch, Cath, Cysto, Specials, and Bi-Plane)
 - MRI (stationary or portable, incl. B-field surveys as necessary)
 - CT Scanners
 - PET and fusion scanners
 - Nuclear Medicine Imaging Systems
- Structural shielding design (radiation barrier criteria) and evaluation for medical imaging facilities
 - Diagnostic and nuclear imaging suites
 - Therapy and support suites, e.g., linacs, cyber knives, simulators
- Patient, public, and fetal dose assessment
- Image quality optimization
- Regulatory and general quality assurance consultation
- Radioactive materials license and registration preparation, incl. renewals and amendments

- Radiation safety program and nuclear medicine program audits
- Semi-annual radioactive sealed-source leak testing

LITIGATION SUPPORT

We view litigation support as an important part of being responsible health physicists. We believe it is important for there to be an educated voice in the realms of law and government to inform and educate lawmakers, lawyers, juries, and the public about both the risks and benefits of radiation and radioactive materials. However, we value truth and integrity above all else and, as such, we report only what the data indicates, not what we, or anyone else, want it to indicate. We have served as consulting and testifying experts for both plaintiffs and defendants, concerning radiation-related injury claims and toxic tort cases.

PROJECT MANAGEMENT EXPERIENCE

Foxfire Scientific has project management experience with a variety of radiological health and safety program operations. For a uranium mine closure project, we designed and implemented the worker safety program and monitoring protocols. We collaborated with the prime contractor from the initial proposal through to project completion. The safety program included air monitoring, contamination control, worker safety training, and bioassay monitoring. We prepared the safety aspects of the operating procedures and all the safety program procedures. In addition, Foxfire Scientific maintained all dosimetry records and provided closeout surveys and reports thereof.

In the area of retrospective studies, Foxfire Scientific has a proven track record as both the sole contractor and as a member of a team of specialists. Foxfire was selected to perform a dose reconstruction for workers and members of the public at and near a collection of uranium mines and mills, and along haul routes from the mines to the mills. We evaluated operations at the mines, ore haul routes with consideration of temporal variation in the tonnage transported, operation of the mills, atmospheric transport of released particulates, time and motion studies of potentially exposed individuals, and performed detailed analyses of the external and internal doses to the individuals. In another instance, Foxfire was a member of a team wherein other firms performed the atmospheric and hydrologic transport analyses of radioactive contaminants and Foxfire subsequently performed the environmental transport through foodstuffs and the dose reconstruction to individuals.

Foxfire Scientific also has experience with the management and oversight of the radiological characterization of CERCLA sites and similar sites, including FUSRAP sites. We have worked for both Potentially Responsible Parties and for owners of adjacent, impacted properties and government agencies. Foxfire has prepared the radiological component of conceptual site models, remedial investigation/feasibility studies, radiological characterization surveying and sampling plans, and human/ecological risk assessments. We have worked with other specialists such as geophysicists to perform site investigations to locate buried wastes and to prepare site management and remediation plans.

List of Select Clients

- Army Corp of Engineers
- Austin Radiological Association
- Apollo Environmental Strategies, Inc.
- Baylor College of Medicine
- British Petroleum
- Brown & Caldwell, Inc.
- Browning Ferris Industries
- Chevron-Texaco
- Conoco-Phillips
- DuPont
- Exxon-Mobil
- Fulbright & Jaworski, L.L.P.
- Mineral extraction industries
- NeoServe/Syntier Solutions
- Oak Ridge Associated Universities
- Power and training reactors
- Rio Grande Resources
- R.P. Kincheloe
- Seton Healthcare Network
- SRK, Inc.
- Southwest Research Institute
- State of Nevada



FOR IMMEDIATE RELEASE:

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FOX FIRE SCIENTIFIC, INC. NAMED 2007 AGGIE 100 HONOREE

COLLEGE STATION, TX. (Friday, October 26, 2007) – Foxfire Scientific, Inc. of College Station is among the firms selected for the 3rd annual “Aggie 100” list of the fastest-growing companies owned and operated by Texas A&M University (TAMU) former students. The program is sponsored by Mays Business School’s Center for New Ventures and Entrepreneurship. Foxfire Scientific was recognized as number 27 on the list.

Foxfire Scientific, Inc. is an Aggie-owned and operated small business dedicated to providing clients with comprehensive health physics, medical physics, and radiological health engineering solutions of the highest quality. The company was founded in 1999 by Dr. Ian Hamilton (’93), while on the faculty of the TAMU Department of Nuclear Engineering, as an engineering consulting firm. Dr. Matthew Arno (’00) joined Foxfire as Co-Owner, Vice President and Chief of Operations in 2001. “Everyone who has ever worked for our company has had a connection to Texas A&M – be they students, former students, or faculty – they all bleed maroon,” said Hamilton.

The 100 companies with the highest compound annual revenue growth from 2004 to 2006 were recognized at a formal luncheon at The Zone Club at Texas A&M University’s Kyle Field on Friday, October 26, 2007. The honorees are also featured in the November 2007 issue of *Texas Aggie* published by The Association of Former Students.

“Texas A&M is proud of making the Aggie 100 an annual event to celebrate Aggies who have gone on to create businesses that are thriving not only in the U.S., but also around the world,” says Richard Scruggs, executive director of the Mays Business School’s Center for New Ventures and Entrepreneurship.

A complete Aggie 100 list can be viewed at www.aggie100.com.

BACKGROUND

ABOUT THE AGGIE 100

The Aggie 100 program, one-of-a-kind at the college level, was created by Mays Business School’s Center for New Ventures and Entrepreneurship, whose mission is to provide encouragement, education, networking and assistance to entrepreneurially-minded students, faculty and Texas businesses. Aggie



100 is a unique way for Texas A&M University to demonstrate its pride in the accomplishments of its former students while enriching the educational experience for today's students.

While there are many ways to define business success, the Aggie 100 focuses on growth as an indicator of job creation, product acceptance and entrepreneurial vision. The Aggie 100 program identifies, recognizes and celebrates the 100 fastest growing Aggie-owned or Aggie-led businesses in the world.

Companies were required to meet the following criteria:

- In business for 5 years or more as of June 30, 2007,
- Verifiable revenues of \$100,000 or more for calendar year 2004, and
- Operations consistent with the Aggie Code of Honor.

Additionally, the company had to meet one of the following leadership criteria:

- A Texas A&M University former student or group of former students must have owned 50% or more of the company from January 1, 2004 through December 31, 2006,
- A Texas A&M University former student must have served as the company's chief executive (for example chairman, CEO, president or managing partner) from January 1, 2004 through December 31, 2006, or
- A Texas A&M University former student must have founded the company and been active as a member of the most senior management team from January 1, 2004 through December 31, 2006.

About The Center for New Ventures and Entrepreneurship

Texas A&M's Center for New Ventures and Entrepreneurship develops, disseminates and assists in the application of entrepreneurial knowledge. Founded in 1999, the Center is part of Mays Business School's Department of Management. The Center enhances student education through campus speakers, competitions, work experiences and financial support. Texas A&M faculty and Technology Commercialization Center benefit from the Center's educational programs, extensive business community network and the Center's entrepreneurial services. The Center also reaches out to the state's business community offering educational programs, business assistance and access to University resources. The Center is supported by corporate and individual members and sponsors who believe in the value of an entrepreneurial education program and the potential of Texas businesses interacting with Texas A&M University.

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