



## Fire Research Laboratory Origin and Progress — An Overview —



**1987** — ATF’s response to the Dupont Plaza Hotel fire in Puerto Rico demonstrates the value of fire modeling and materials analysis in fire investigation. ATF fire investigation experience identifies a need for a better understanding of fire phenomenon.

**1990** — Arson and Explosives Division CFI Project Officer contacts Dr. Quintiere (University of Maryland, Fire Protection Engineering Department) and Bud Nelson (Hughes Associates), veterans of the Dupont Plaza Hotel fire investigation, to develop a CFI training curriculum entitled " The Dynamics of Building Fires". The training, taught by University of Maryland professors, includes exposure for fire modeling, hands-on fire experiments and exposure to large-scale test facilities. This training program helps establish ATF CFIs as some of the best fire investigators in the field.

**1992 / 1993** — ATF and IAAI propose a training facility be built at Federal Law Enforcement Training Center (FLETC) that would allow ATF to train investigators in fire dynamics. A proposal prepared by an ATF Special Agent describes a facility with instrumented, re-burnable cells to illustrate fire principles. One million dollars is allocated to FLETC for this purpose. This proposal was the seed that eventually grew into the Fire Research Laboratory that has field support, training, and research responsibilities.

**June 1995** — An ATF Special Agent assigned to the Arson Enforcement Branch holds an initial discussion with the Assistant to the President of the University of Maryland (UMD) on fire research partnering and provides a document entitled “Benefits to Having ATF Burn Facility at the University of Maryland, College Park”. The document outlines the need for ATF to better understand fire behavior and support CFIs and NRTs.

**Fall 1995** — ATF makes a request to OMB for funding to create a “Fire Investigation and Research” facility. The UMD, MFRI (Maryland Fire & Rescue Institute) and ATF partnership is outlined in submissions to OMB. The first fire protection engineer is hired and assigned to the Arson and Explosives Division.

**December 1995** — A meeting is held with UMD to flesh out the partnership. ATF’s Assistant Director and Deputy Assistant Director of Training and Professional Development (TPD), along with staff members from the Special Investigations Program, Career Development Division, Legislative Affairs and the Arson Enforcement Branch represent ATF. The F.I.R.E. (Fire Investigation, Research and Education) Center concept is born.

**May 8, 1996** — Letter from the ATF Assistant Director of Training and Professional Development to the University of Maryland documents the decision to build a new National Laboratory Center in combination with the construction of a Fire Investigation Research and Education (FIRE) Center. The memo points to enhancing “the expertise of our Certified Fire Investigators and improved Bureau ability to investigate uncontrolled fires.”

**1996** — ATF and the University of Maryland requested that IAFC, IACP, IAAI and others support the request to fund the FIRE Center. The support letters to the Subcommittee on Treasury, Postal Service and General Government spoke about the need for “a criminal/forensic research facility to support investigations and conduct scientific inquiries into the cause and behavior of fire”.

**1997** — FY97 Budget directs that the FIRE Center be “included in the new forensic laboratory.”

**August 1997** — ATF Director Magaw signs an MOA with the UMD to share “expertise and knowledge ...in the areas of fire science, arson and explosives investigations and associated engineering, physical and life sciences.”

**November 1997** — International Conference on Fire Research for Fire Investigation hosted by ATF. Over 70 leading authorities in fire investigation, fire research and education from six countries meet to develop a blueprint for the FIRE Center role and facility design based on investigative and research needs. ATF Deputy Director Bradley A. Buckles opened the Conference.

**April 1998** — An ATF FIRE Strategic Planning Meeting is held to clarify and define the FIRE role. Representatives from TPD, AEPD, OST, and Laboratory Services participate. The group agrees that the FIRE Center should conduct “1) case specific research/testing that supports on-going field investigations and 2) fundamental fire investigation research that expands fire investigation knowledge and develops fire investigation tools”. In addition, the FIRE Center supports “CFI education, special agent education and fire investigation community education/training.”

Some key decisions —

- FIRE Center Strategic Goals are created.
- It is agreed that the FEA FPEs “will become employees of OST and be located at the FIRE Center.”
- CFI’s should “rotate into the FIRE Center to coordinate field testing with lab staff”.
- A FIRE Working Group is formed that includes FPEs, SA/CFI Program Manager and Chief, FRL.

**1998** — FIRE Working Group holds meetings to develop lab design and plan operations.

**August 1998** — FIRE Center Concept Paper/Progress Report provided to Assistant Director of the Office of Science and Technology outlining staffing requirements, mission and operations to brief SLT.

**July 2000** — Initial FRL technical staff hired, including 3 FPEs, a CFI Program Manager and a Senior Fire Scientist.

**June 2001** — SLT briefed on FRL start-up progress, current staffing, staff training, casework/support activities to date and how FRL staff will provide field support to CFI’s. Current FRL work includes NRT support, field testing (e.g. Smoketown test burns), FLETC instruction, and individual case support, as well as new National Laboratory start-up tasks.

Cross-training with AEPD FPEs begins to prepare for transition to FRL. AEPD Chief and Director, Laboratory Services attended the briefing.

**May 2002** — SLT briefed on FRL operating costs, travel requirements for CFI field support, project completion timeline and operational planning.

**July 2002 Staffing Levels** — **FRL** – 3 FPEs, 2 Mechanical Engineers, 1 Electrical Engineer, 1 Physicist, 1 Forensic Fire Scientist, and 1 SA/CFI Program Manager. The FRL staff represents 73 years of fire science and investigation experience, and 15 years of volunteer fire fighting experience.