



## **Tennessee (Memphis) Service Center**

**S. Michael Avanzi, P.E.**  
*Forensic Electrical Engineer*

Memphis, Tennessee  
901-375-4062

### **EDUCATION:**

Christian Brothers High School, Memphis, Tennessee  
Christian Brothers University, Memphis, Tennessee – Bachelor of Science, Electrical Engineering, *Summa Cum Laude*  
Union University, Jackson, Tennessee – Master Degree, Business Administration

### **EMPLOYMENT:**

Unified Investigations & Sciences, Inc.  
Memphis, Tennessee  
Forensic Electrical Engineer  
March 2009 to Present

Responsibilities include the evaluation of failures and malfunctions of equipment and systems leading to loss or injury. These systems include primary and secondary electrical distribution systems, structural wiring, generators, motors, motor controls, HVAC equipment, appliances, and other electrical utilization devices.

Expertise also includes evaluation of electrical grounding systems and connected equipment and appliances as related to personnel safety and property loss. Perform failure analysis and damage assessment of electrical facilities and systems. Evaluations of lightning strike protection systems and lightning strike evaluations are also performed.

## **EMPLOYMENT (CON'T):**

Memphis Light, Gas & Water

Memphis, Tennessee

Design Engineer Level 3-Gas Engineering, Acting Lead Engineer-Residential Engineering,

Design Engineer Level 1&2-Residential Engineering, Staff Engineer Level 1-Customer Engineering

June 2003-March 2009

Mr. Avanzi was responsible for designing natural gas transmission and distribution systems. He was involved in the design of corrosion control, cast iron replacement, pipe sizing, material specifications, gas metering, street improvement relocations, regulator stations and high-pressure transmission lines.

Additional responsibilities included challenging electric, gas and water utility distribution designs for new residential developments and new residential and commercial individual services. In addition, Mr. Avanzi was responsible for monitoring and overseeing the workload of ten employees and the training of new employees in electric, gas and water utility design and drafting for residential developments.

Cummins Aftermarket

Memphis, Tennessee

Electrical Engineer Intern

July 2001-May 2003

Mr. Avanzi was responsible to the plant electrical engineer for various projects relating to the plant's manufacturing machine controls and the plant's power distribution systems.

## **PROFESSIONAL ORGANIZATIONS:**

Institute of Electrical and Electronics Engineers (IEEE)  
International Association of Arson Investigators (IAAI)  
Engineers Club of Memphis  
National Fire Protection Association (NFPA)  
NFPA Electrical Society  
National Association of Fire Investigators (NAFI)  
Tau Beta Pi

## **LICENSES AND REGISTRATIONS:**

Arkansas	- Registration number 13750
Mississippi	- Registration number 19132
Missouri	- Registration number 2009013102
Tennessee	- Registration number 111538

## **SPECIALIZED TRAINING:**

- CFITrainer.net, Effective Investigation and Testimony, 10/19/09, 3 hours-Tested
- CFITrainer.net, Arc Mapping Basics, 8/28/09, 4 hours-Tested
- Unified Investigations & Sciences, Inc., UIS Investigation School/Investigations, 8/10/09-8/14/09, 40 hours
- PDHOnline, Thermal Stress and Thermal Shock of Materials, 6/9/09, 1 hour-Tested
- Engineer's Club of Memphis, Secondary Containment Coatings, 6/8/09, 1 hour
- IEEE Webinar, Networking Solutions for Career Success, 5/20/09, 1 hour
- Fire Findings Laboratories, Residential Electricity for Fire Investigators, 4/15/09-4/16/09, 16 hours-Tested
- IEEE, A Seminar on Ethical Behavior, 2/06/09, 1 hour
- Memphis Light, Gas & Water, The Question Behind the Question: Practicing Personal Accountability at Work and in Life, January 2009, 4 hours
- Memphis Light, Gas & Water, Utility Horizons: Design, Compliance & Technology, 2008 MLGW Engineering Seminar, 12/09/08, 8 hours
- Memphis Light, Gas & Water, Supervisor Assessment Center, November 2008, 24 hours-Tested
- PDHOnline.org, Conduit System Design, 11/07/08, 4 hours-Tested
- Memphis Light, Gas & Water, Capturing and Transferring Knowledge and Skills, 10/21/08, 1 hour
- Memphis Light, Gas & Water, MLGW Community Conservation Day Training, 10/03/08, 3 hours
- Engineer's Club of Memphis, Boston Big Dig Incident, Adhesive Anchoring Systems Basics and New Testing Requirements, 9/29/08, 1 hour
- IEEE, Optical Imaging, Bioinformatics Software Development, and e-Learning at St. Jude Children's Research Hospital, 9/25/08, 1 hour
- Memphis Light, Gas & Water, Staying Focused in Times of Change, 9/11/08, 1 hour
- Memphis Light, Gas & Water, Family Medical Leave Act Training, 8/12/08, 1.5 hours

## **SPECIALIZED TRAINING (CON'T):**

- Engineer's Club of Memphis, Owensboro, KY Riverfront Project, 7/14/08, 1 hour
- Memphis Light, Gas & Water, Designing Effective Rewards & Recognition Programs, 7/10/08, 1 hour
- Engineer's Club of Memphis, Evolution of Concrete Repairs & Patching: Materials & Methods, 6/16/08, 1 hour
- Engineer's Club of Memphis, ABC's of Trench Drainage, 6/09/08, 1 hour
- Memphis Light, Gas & Water, Intermediate Spanish, April-June 2008, 30 hours-Tested
- Engineer's Club of Memphis, Dynamic Stormwater Modeling in Urban Areas, 3/24/08, 1 hour
- IEEE, Basic Grounding Theory for Electrical Substations, 2/01/08, 4 hours
- Memphis Light, Gas & Water, Basic Spanish, January-March 2008, 30 hours-Tested
- Memphis Light, Gas & Water, MLGW Ethics Training, 1/25/08, 1 hour
- Memphis Light, Gas & Water, Performance Appraisal Training, 1/14/08, 4 hours
- Memphis Light, Gas & Water, Customer Satisfaction, 12/10/07, 4 hours
- Memphis Light, Gas & Water, Coaching, Directing & Delegating, 12/06/07, 3 hours
- Memphis Light, Gas & Water, Understanding Procurement and Contracts, 10/03/07, 4 hours
- Memphis Light, Gas & Water, Connecting with Customers, 10/01/07, 2 hours
- Memphis Light, Gas & Water, Effective Listening, 8/15/07, 4 hours
- Memphis Light, Gas & Water, Budget Process, 7/24/07, 4 hours
- Memphis Light, Gas & Water, Getting your Employees Engaged and Keeping Them There, 5/10/07, 1 hour
- Memphis Light, Gas & Water, FrontPage 2003 Level 1, 5/01/07 & 5/08/07, 8 hours-Tested
- Memphis Light, Gas & Water, Team Building, 2/27/07, 8 hours

**SPECIALIZED TRAINING (CON'T):**

- Memphis Light, Gas & Water, MLGW Compensation Strategy, 2/12/07, 3 hours
- Memphis Light, Gas & Water, Forward Thinking-The Future is Today, 2005 MLGW Engineering Seminar, 12/14/05, 8 hours
- Memphis Light, Gas & Water, MLGW: Becoming More Eco-Friendly, 2004 MLGW Engineering Seminar, 12/15/04, 8 hours
- Memphis Light, Gas & Water, New Employee Orientation, June 2003, 40 hours