

**Sunrise Powerlink Transmission Line Project  
Application No. 06-08-010  
MGRA Phase 1 Direct Testimony, Appendix J**

**APPENDIX J – JOSEPH W. MITCHELL, PH.D.**

**Vitae**

**2007** – Presented work with Oren Patashnik at *Fire & Materials 2007* conference in San Francisco, whose Scripps Ranch data demonstrated potential ember vulnerability of curved-tile roofing. Provided comment on and criticism of San Diego County’s ‘shelter-in-place’ guidelines. Wrote an op-ed piece published in the San Diego Union Tribune and provided commentary for News 8 KFMB piece on shelter-in-place.

**2006** – Publication of peer-reviewed paper on the WEEDS water-spray wildland fire protection system in the *Fire Safety Journal*. Presentation of results at the *Third International Fire Ecology and Management Congress*, San Diego, CA.

**2005** – Assimilation of all relevant academic literature regarding structure ignition in wildland fires and the dominance of wind-driven catastrophic events. Published articles in *Home&fire* and *Wildfire* trade magazines. Computer modeling validates WEEDS principles.

**2004** – Founded M-Bar Technologies and Consulting to promulgate knowledge regarding WEEDS and the importance of designing for firebrand protection under high-wind conditions. Poster session at *Wildfire 2004* conference, Reno, NV. Article published in *San Diego Reader* magazine.

**2001-2003** – Developed the WEEDS method for structural defense during wildland fires. Completed in time for the October 26, 2003 Cedar fire, when it was tested under wildland fire conditions. It worked.

**1999** – Returned to the United States from Europe, settling in San Diego, CA.

**1996-present** – Work in software engineering and management for major multinational corporations.

**1989-1998** – Lived and worked in Europe first as a postdoctoral physicist and then in software engineering for a multinational corporation. Resided in Switzerland, Germany, France, and Belgium.

**1993-1996** – Postdoctoral work for University of California at Davis in heavy ion physics, performed at CERN. Continued with work in lasers and optical systems.

**1989-1993** – Postdoctoral work for McGill University in high energy physics at CERN (Center for European Nuclear Research, Geneva, Switzerland) and DESY (Deutsches Electron-Synchrotron, Hamburg, Germany). Developed expertise in computer modeling, lasers and optical systems.

**MGRA Phase 1 Direct Testimony, Appendix J**  
**Sunrise Powerlink Transmission Project**  
**Application No. 06-08-010**

**1989** – Ph. D. in Physics received from Ohio State University, Columbus, Ohio

**1981-1989** – Graduate research in elementary particle (neutrino) physics, Columbus and Los Alamos National Laboratory, NM. Trained in electronics, mechanical engineering, computing, energy measurement and statistics.

**1981-1983** – Graduate teaching assistant, OSU physics department.

**1981** – Bachelor of Science in Physics received from Ohio State University, Columbus, Ohio

**Publications**

**Fire Publications & Presentations:**

Mitchell, Joseph W.; Playing with fire: The county's 'Shelter in Place' gamble; The San Diego Union-Tribune; May 2, 2007, p. B7.

[http://www.signonsandiego.com/uniontrib/20070502/news\\_lz1e2mitchell.html](http://www.signonsandiego.com/uniontrib/20070502/news_lz1e2mitchell.html)

Mitchell, Joseph W. and Oren Patashnik; Firebrand Protection as the Key Design Element for Structure Survival during Catastrophic Wildland Fires; Fire and Materials 2007, San Francisco, CA; Jan 29-31, 2007

[http://www.mbartek.com/FM07\\_FirebrandsWildfires\\_1.1F.pdf](http://www.mbartek.com/FM07_FirebrandsWildfires_1.1F.pdf)

Mitchell, Joseph W.; REDUCING URBAN INTERFACE ECOLOGICAL IMPACTS AND FIRE LOSSES THROUGH STRUCTURAL FIREBRAND PROTECTION; Third International Fire Ecology and Management Conference; San Diego, CA; Nov13-17, 2006. Presentation available from [www.mbartek.com](http://www.mbartek.com).

Mitchell, Joseph W.; Wind-enabled ember dousing; Fire Safety Journal; v. 41 (2006); pp 444-458

Mitchell, Joseph W.; Brand Dilution (Cover article); Wildfire Magazine; Mar. 2005  
[http://wildfiremag.com/wui/brand\\_dilution/](http://wildfiremag.com/wui/brand_dilution/)

Mitchell, Joseph W.; WEEDS: Wind Enabled Ember Dousing System; Home&fire Magazine; Spring, 2005; p. 32

Mitchell, Joseph; Engineering a Miracle; San Diego Weekly Reader Magazine; April 29, 2004

WEEDS poster session; Wildfire 2004 conference, Reno, NV; Mar. 2004

**MGRA Phase 1 Direct Testimony, Appendix J**  
**Sunrise Powerlink Transmission Project**  
**Application No. 06-08-010**

**Physics:** List of neutrino, high-energy, and heavy ion physics publications is available upon request.

**Other Experience**

**International:**

Spoken & written German; some French. Extended business trips to Japan.

**Contact info:**

Joseph W. Mitchell  
M-bar Technologies and Consulting  
19412 Kimball Valley Rd.  
Ramona, CA 92065

Phone: 760 787 0794  
Cell: 760 703 7521  
Email: [jwmitchell@mbartek.com](mailto:jwmitchell@mbartek.com)  
Website: [www.mbartek.com](http://www.mbartek.com)