

Exhibit 12a. Mean and gust speed time histories for Julian during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

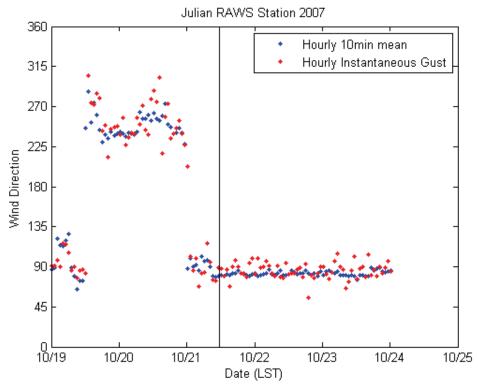


Exhibit 12b. Wind direction time histories for Julian during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

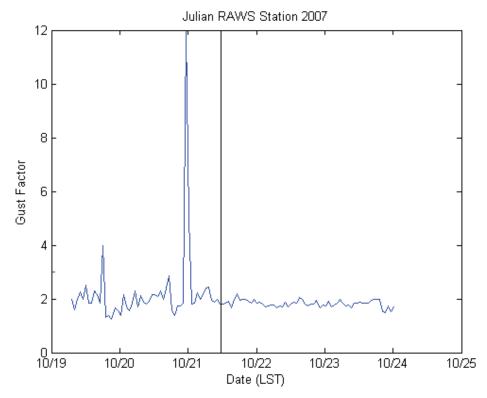


Exhibit 12c. Gust factor time history for Julian during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

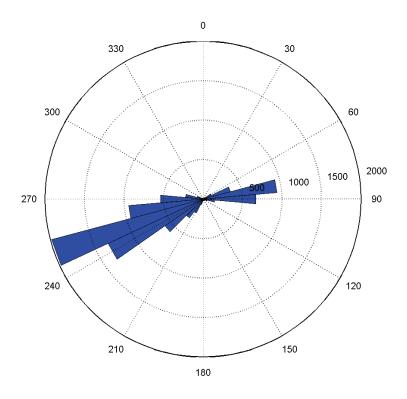


Exhibit 12d. Wind rose for Julian from 2007.



Exhibit 13a. Pine Hills actual location; note tree to the northeast and east where storm winds originated.



Exhibit 13b. Pine Hills anemometer location and location of photographs PIHC1-4, PIHC1-7, and PIHC1-8 with wind direction range during the Santa Ana event; note the large tree directly upwind of the anemometer.



Exhibit 13c. Photograph PIHC1-4 looking SE (see Exhibit 13b).



Exhibit 13d. Photograph PIHC1-7 looking E (see Exhibit 13b).



Exhibit 13e. Photograph PIHC1-8 looking NE (see Exhibit 13b).

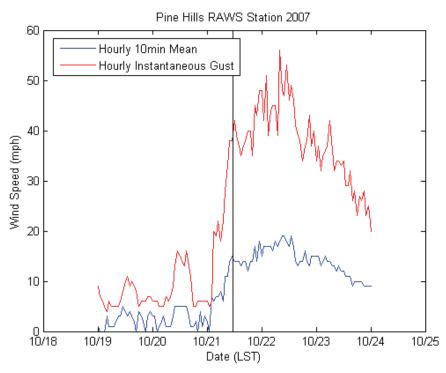


Exhibit 13e. Mean and gust speed time histories for Pine Hills during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

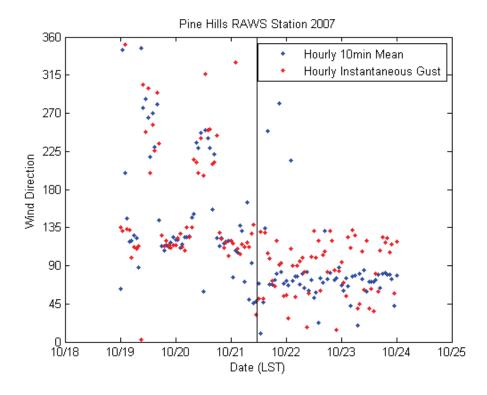


Exhibit 13f. Wind direction time histories for Pine Hills during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

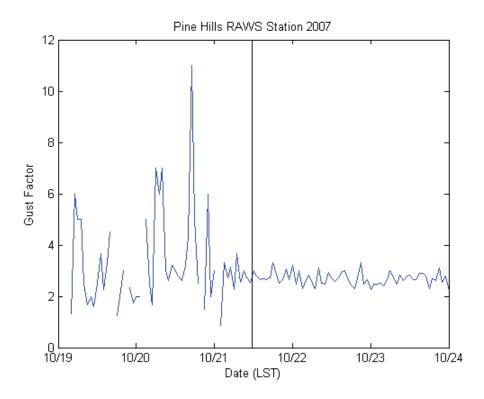


Exhibit 13g. Gust factor time history for Pine Hills during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

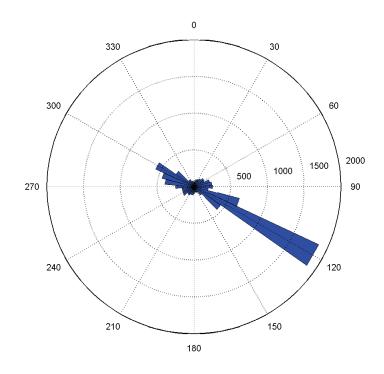


Exhibit 13h. Wind rose for Pine Hills from 2007.



Exhibit 14a. Ramona Airport ASOS station location. Note suburban development upwind for the Santa Ana event and airport buildings upwind causing some shielding.



Exhibit 14b. Ramona Airport ASOS station and location of photographs KRNM1 and KRNM3; "A" is the anemometer site.

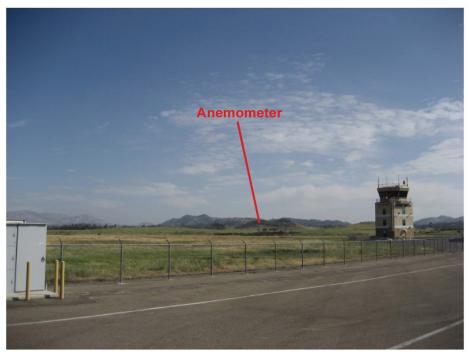


Exhibit 14c. Photo of Ramona ASOS from location KRNM1 (see Exhibit 14b).

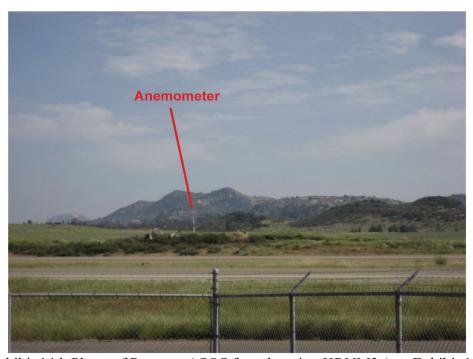


Exhibit 14d. Photo of Ramona ASOS from location KRNM3 (see Exhibit 14b).

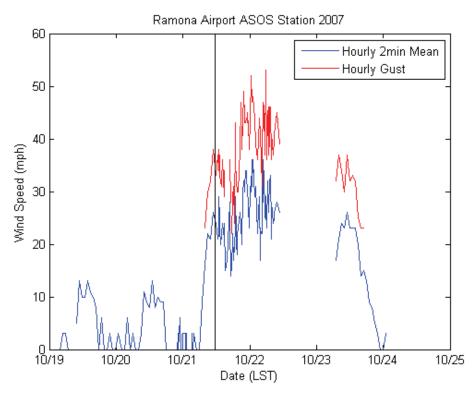


Exhibit 14e. Mean and gust speed time histories for Ramona Airport during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

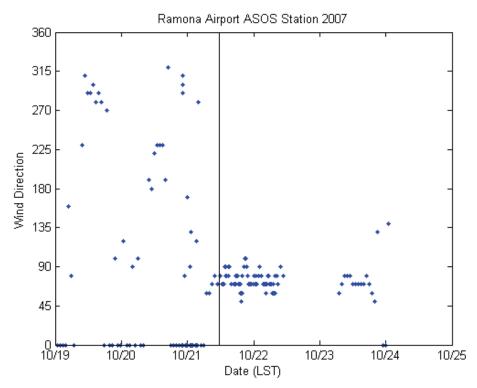


Exhibit 14f. Wind direction time histories for Ramona Airport during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

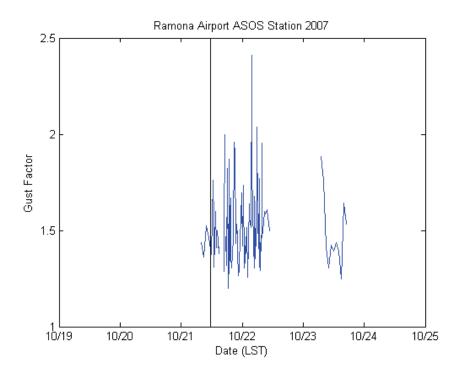


Exhibit 14g. Gust factor time history for Ramona Airport during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

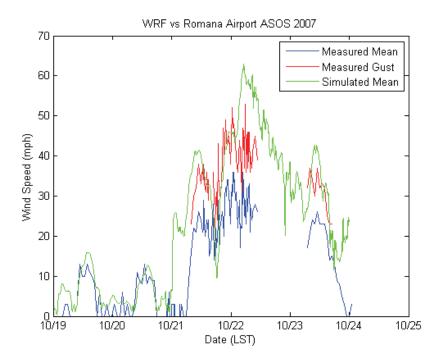


Exhibit 14h. Mean and gust speed time histories for Ramona Airport with WRF mean wind speeds imposed.



Exhibit 15a. Goose Valley anemometer location as recorded and the actual location; note sheltering buildings and trees to the east-northeast.

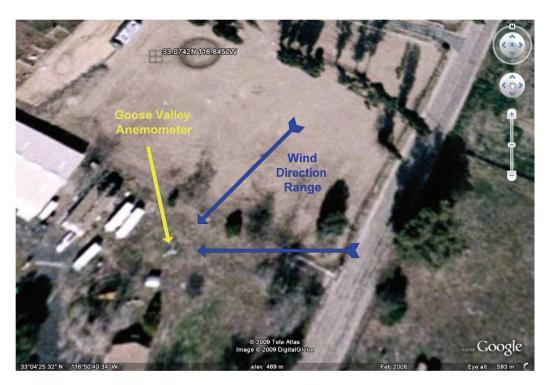
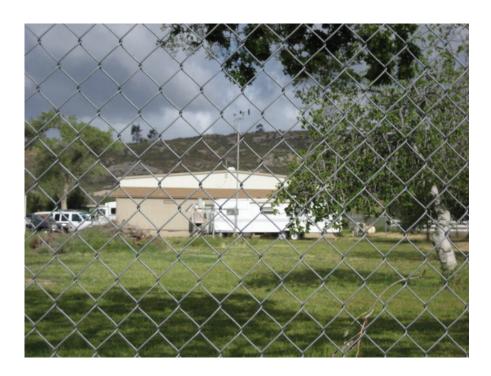


Exhibit 15b. Goose Valley anemometer location with wind direction range during the Santa Ana event; note sheltering trees upwind of anemometer.



looking northwest.



looking northeast - anemometer is below tree height

Exhibit 16. Goose Valley anemometer- photographs.

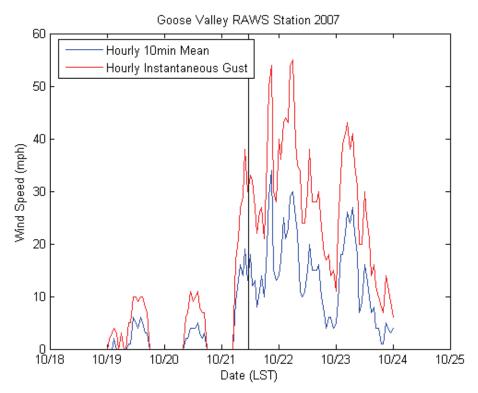


Exhibit 17a. Mean and gust speed time histories for Goose Valley during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

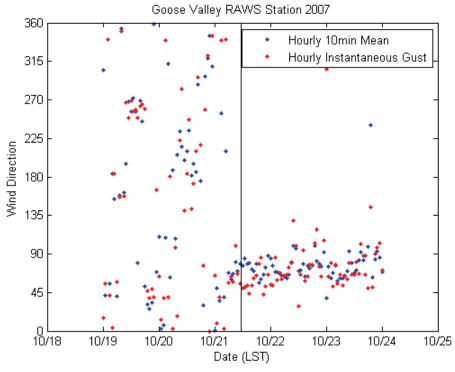


Exhibit 17b. Wind direction time histories for Goose Valley during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

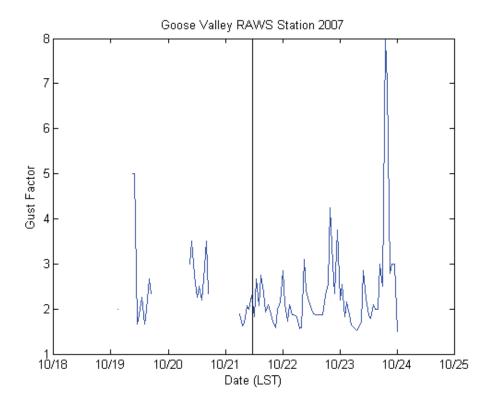


Exhibit 17c. Gust factor time history for Goose Valley during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

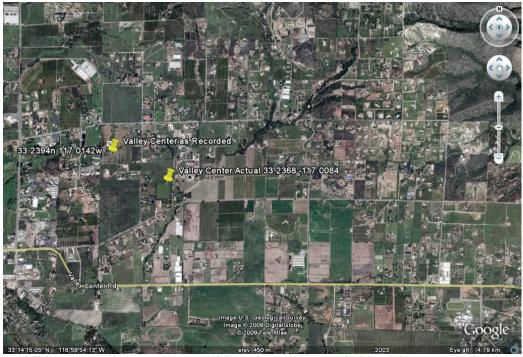


Exhibit 18a. Valley Center actual location and recorded location; note suburban or agricultural roughness to northeast and east where storm winds originated.

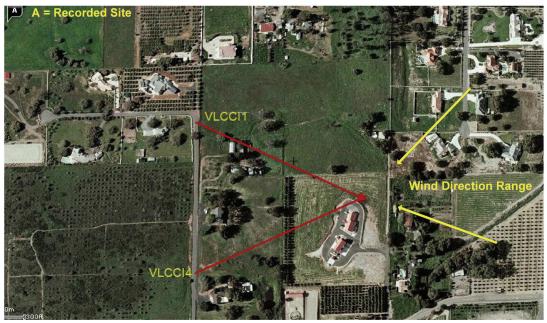


Exhibit 18b. Valley Center anemometer location and position of photographs of Exhibits 18c and 18d.



Exhibit 18c. Valley Center anemometer; photo VLCCI1 looking southeast, see Exhibit 18b for location.

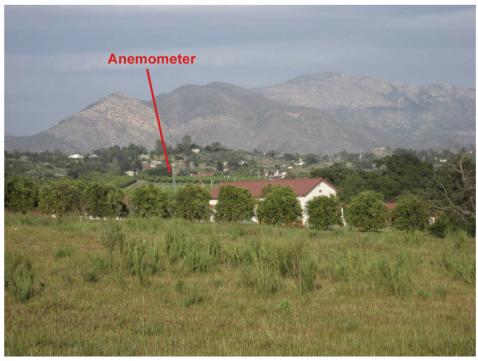


Exhibit 18d. Valley Center Anemometer; photo VLCCI4 looking northeast, see Exhibit 18b for location.

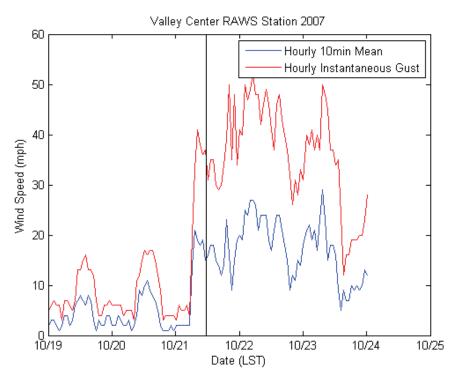


Exhibit 19a. Mean and gust speed time histories for Valley Center during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

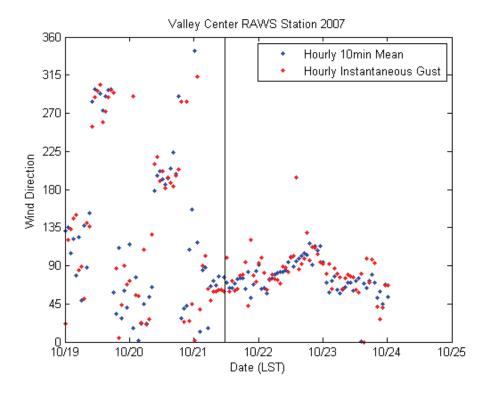


Exhibit 19b. Wind direction time histories for Valley Center during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

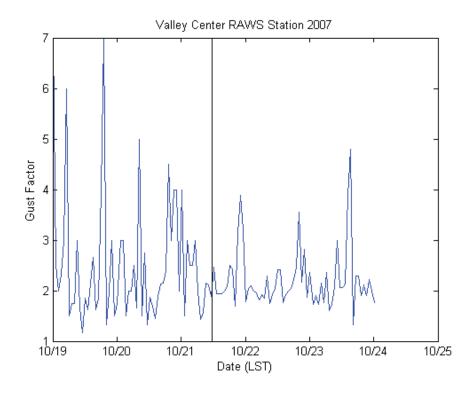


Exhibit 19c. Gust factor time history for Valley Center during the Santa Ana event. The black line indicates the Witch Creek fire initiation time.

Appendix A— Qualifications of Jon A. Peterka

Jon A. Peterka

Co-founder and President, Cermak Peterka Petersen, Inc., Wind Engineering Consultants, Fort Collins, Colorado.

Professor Emeritus, Fluid Mechanics and Wind Engineering Program, Department of Civil Engineering, Colorado State University, Fort Collins, Colorado.

Contact:

CPP, Inc. 1415 Blue Spruce Drive Fort Collins, CO 8524 Office 970-221-3371 Direct 970-498-2323 jpeterka@cppwind.com

EDUCATION

Ph.D. Fluid Mechanics and Thermodynamics, Brown University, 1968 M.S., B.S. Civil Engineering, Colorado State University, 1964, 1965

EXPERIENCE

35 years experience in wind-engineering applications and research. Evaluated over 1000 buildings and structures for wind loads (local cladding pressures and/or frame forces and moments) primarily through wind tunnel testing; evaluated pedestrian wind climate for many of these buildings; measured forces on numerous other structures including towers, stacks, bridges and solar collectors; defined snow loads for many structures; investigated pollutant dispersion from buildings and stacks; determined heat transfer rates from structure surfaces in the wind; helped define siting criteria for wind energy projects as well as wind tunnel and field testing to assist in the development of wind turbine technology; developed meteorological analysis procedures for power line rating.

Dr. Peterka's work in wind engineering includes membership on the national committee which writes the national wind load standard ASCE 7, development of the new wind hazard map for the national wind load standard, consulting for the FAA on aircraft wind shear, participation in a National Research Council report to the U.S. Congress on wind damage, and Board of Directors of the Wind Engineering Research Council. He is currently chairman of an ASCE Standards committee on wind tunnel testing of structures. Research in wind engineering includes statistical characteristics of fluctuating pressures, adjacent building effects, wind flow around and downwind of buildings, natural ventilation, transport of snow and sand, and siting criteria for anemometers. Other experience includes three years experience in development of liquid rocket propulsion systems for the U.S. Army Missile Command.

PROFESSIONAL ACTIVITIES/AWARDS

Registered Professional Engineer in Colorado, Florida and Mississippi. Organizational memberships include the American Society of Civil Engineers, American Association of Wind Engineers, American Society of Mechanical Engineers, American Institute of Aeronautics and Astronautics, and National Society of Professional Engineers. Professional committee activities within the American Society of Civil Engineers includes: ASCE-7 Wind Load Subcommittee, member (1990-present); Aerodynamics Committee, member (1978-present), chairman (1984-1988); Task Committee on Microclimate of Buildings, member (1980-1983); Task Committee on

Wind-Tunnel Testing of Structures, member (1981-1986, 1991-1994); Task Committee on Wind Forces on Solar Collectors, member (1982-1988); Task Committee on Mitigation of Severe Wind Damage, member (1985-1988); Task Committee on Modeling of Blowing Snow and Sand, member (1985-1989); Committee on Wind Effects, member (1982-1985, 1987-1993); Executive Committee, Aerospace Division, member (1987-1992), chairman (1991); Standards Committee on Wind Tunnel Testing (1993-present), chairman (1993-present). Other professional activity includes Secretary/Treasurer of the Wind Engineering Research Council (predecessor of the American Society of Wind Engineers (1979-1985), and board of directors (1979-1989); National Research Council Panel on Wind Engineering (1987-1990). Honorary societies include Sigma Xi, Phi Kappa Phi, Sigma Tau and Chi Epsilon; awards include two awards for excellence in teaching at Colorado State University, ASCE 1989 Aerospace Science and Technology Award, Wind Engineering Research Council 1990, Outstanding Wind Engineering Research Award, the ASCE 1999 Raymond C. Reese Research Prize, and the Engineering News Record Top 25 Newsmakers of 2006 award.

An incomplete list of some specific activities related to Wind Hazard Assessment and Mitigation –

Developed an anemometer siting guide for the Federal Aviation Administration

Developed the 3-second gust wind map that permitted ASCE 7 national wind load standard to

move from a fastest mile map to a gust map – awarded the 1999 ASCE Raymond C.

Reese Research Prize

Assessment of wind damage at the Limon Tornado site

Assessment of wind damage at the Pingree Park tornado site

Assessment of wind damage after Hurricane Andrew

Participated in a National Research Council report to Congress on Natural Hazards

Lead investigator to develop a Monte Carlo simulation for design level hurricane winds in Hawaii and Guam under NASA sponsorship

Routinely develop risk analyses for clients for design against hurricanes and tornadoes
Currently developing terrain-induced impacts for design against hurricane winds in Hawaii
Member of the ASCE 7 Wind Load Sub-committee that writes the national wind load standard
ASCE 7, and that forms the basis for the wind load provisions for the IBC building code
Chairman of the ASCE standards committee writing a standard of practice for wind tunnel testing
of buildings for design wind loads

Lead investigator in development of a wind uplift model for asphalt shingles, permitting the development of high-wind resistant shingles

Lead investigator to develop a wind uplift test for asphalt singles for Underwriters Laboratory

References for last 10 years

Cochran, L. S., J. A. Peterka, and R.L. Petersen, *Physical Modeling of Roof-Top Helicopter Exhaust Flow Dispersion*, <u>Proceedings of the Fourth Asia Pacific Symposium on Wind</u> Engineering, Surfers Paradise, Australia, July 1997.

Seong, S. H. and J. A. Peterka, *Computer simulation of non-Gaussian multiple wind pressure time series*, <u>Journal of Wind Engineering and Industrial Aerodynamics</u>, Vol. 72, (1997), pp 95-105.

- Peterka, J. A., J. E. Cermak, L. S. Cochran, B. C. Cochran, N. Hosoya, R. G Derickson, C. Harper, J. Jones, and B. Metz, *Wind Uplift Model for Asphalt Shingles*, <u>Journal of Architectural Engineering</u>, Vol. 3, No. 4, (December 1997), pp 147-155.
- Peterka, J. A. and S. Shahid, *Design gust wind speeds for the U.S.*, <u>Journal of Structural Engineering</u>, Vol. 124, No. 2, (February 1998), pp 207-214.
- Seong, S. H. and J. A. Peterka, *Digital generation of surface-pressure fluctuations with spiky features*, <u>Journal of Wind Engineering and Industrial Aerodynamics</u>, Vol 73, (1998), pp. 181-192.
- Peterka, J. A., N. Hosoya, S. Dodge, L. Cochran, J. E. Cermak, *Area-average peak pressures in a gable roof vortex region*, <u>Journal of Wind Engineering and Industrial Aerodynamics</u>, Vol. 77 & 78, (1998), pp. 205-215.
- Heaney, James P., Jon Peterka, and Leonard T. Wright, *Research Needs for Engineering Aspects of Natural Disasters*, <u>Journal of Infrastructure Systems</u>, Vol. 6, No. 1, (March 2000), pp. 4-14.
- Seong, S. H. and J. A. Peterka, *Experiments on Fourier Phases for Synthesis of Non-Gaussian Spikes in Turbulence Time Series*, <u>Journal of Wind Engineering and Industrial Aerodynamics</u>, Vol 89, (2001), pp. 421-443.
- Banks, D. and J.A. Peterka, Tropical Storm Track Prediction Using Autoregressive Time Series Analysis, Americas Conference on Wind Engineering, Clemson University, (2001).
- Peterka, J. A. and David Banks, *Wind Speed Mapping of Hawaii and Pacific Insular States by Monte Carlo Simulation*, Report for NASA Contract NASW-99046, NASA Goddard Space Flight Center, CPP Inc. Project 99-1773, (March 2002).
- Chock, Gary Y. K., Jon A. Peterka, and Leighton Cochran, Orographically Amplified Wind Loss Models for Hawaii and Pacific Insular States, Report for NASA Contract NASW-99045, NASA Goddard Space Flight Center, (March 2002).
- Chock, Gary, Peterka Jon, and Yu, Guangren, Topographic Wind Effects and Directionality Factors for Use in the City & County of Honolulu Building Code, 10th Americas Conference on Wind Engineering, Louisiana State University, Baton rouge (June 2005).

Revised 2008-04

PROFESSIONAL HISTORY – J.A. PETERKA

1959 – 1964	B.S. Civil Engineering, Colorado State University, Fort Collins, CO
1964 – 1965	M.S. Civil Engineering (Engineering Mechanics), Colorado State University, Fort Collins, CO
1965 – 1968	Ph.D. Engineering (Fluid Mechanics and Thermodynamics), Brown University, Providence, RI
1968 – 1970	1st Lt. And Capt. U.S. Army, Missile Development, Army Missile Command, Huntsville, AL
1970 – 1971	Research Engineer, Rocket Propulsion Laboratory, Army Missile Command, Huntsville, AL
1971 – 1976	Assistant Professor of Civil Engineering, Colorado State University, Fort Collins, CO
1976 – 1983	Associate Professor of Civil Engineering, Colorado State University, Fort Collins, CO
1983 – 1993	Professor of Civil Engineering, Colorado State University, Fort Collins, CO (½ time 1985 – 1993) Retired 1993. Emeritus status 1993-present.
1981 – 2008	Vice President, Cermak Peterka Petersen, Inc., Fort Collins, CO (called Cermak/Peterka & Associates, Inc. 1981 - March 1987)
2008 – Present	President, Cermak Peterka Petersen, Inc., Fort Collins, CO

Wind Engineering – Years of Experience				
1963 - 1965 (2 Years) and dispersion of pollutants.	M.S. level research in physical modeling of atmospheric winds			
	Research and applied studies in physical modeling of on buildings, bridges, stadia, arenas and towers; dispersion of ironment; snow loads; wind structure downwind of obstacles;			

Wind loads defined for over 1000 buildings; pedestrian wind evaluation for over 500 buildings; wind loads on numerous bridges, towers and stacks; dispersion measured for several power plant stacks and numerous laboratory or industrial buildings; analysis of meteorological data.

Legal Cases - Jon Peterka - 1998 - 2008

No.	Case	Year	Court	Case #	Lawyer	Activity
1	Wisher, et al. v.	1999-2000	Circuit Court of	99CV006553	Don Carlson	Report
	Mitsubishi, et al.		Milwaukee County,		Crivello, Carlson &	Deposition
	Miller Park Crane		State of Wisconsin		Mentkowski	Trial
2	Fairway Point II vs.	2000-2001	Unknown	Unknown	Scott Marder	Report
	Oriole Fairway Point,				Ruden McClosky Smith	
	Inc., et al.				Schuster & Russel	
	Fairway Point 2 & 3					
	Boca Raton, FL					
3	Sandcastle	2001-2002	Circuit Court of Seventh	2001-30012	Michael T. Haire	Report
	Condominium Assoc.		Judicial Circuit, Volusa	-CICI	Fisher, Rushmer,	
	vs. Columbia Smyrna		County, FL		Werrenrath, Dickson, Talley &	
	Group et al.				Dunlap	
	New Smyrna Beach					
4	World Trade Center Model Tests	2002-2003	Unknown	Unknown	Akshay Gupta - Engineer Exponent	Report
5	Kenneth Conti, etc. vs.	2002	Cuyahoga County Court	CV 02486829	Charles M. Young	Report
	C.J. Systems Aviation,		of Common Pleas, Ohio		Sindell, Young, Guidubaldi &	
	Inc. et.al.				Sucher	
	Univ Health Center					
6	Helicopter Cleveland Hindery v. WedgCor,	2006-2007	District Court, Dougles	04CV404	Brett Godfrey	Report
	et al.	2000 2007	County, Colorado	0401404	Godfrey & Lapuyade	Порог
	Metal Buildng Snow		3,			
	Douglas Cnty, CO					
7	Eleuterius v. State Farm	2006-2007	District Court for Southern	1:06cv647	Michael McCabe	Report
			District of Mississippi,		Allen, Cobb, Hood &	
			Southern Division		Atkinson	
8	Lanier v. State Farm	2006-2007	District Court for Southern	1:06cv563	Ben Mullen	Report
			District of Mississippi,		Bryan, Nelson, Schroeder,	
_	M 1 : 0: 1 E	0000 0007	Southern Division	00.0450	Castigliola & Banahan	Б .
9	Melvin v. State Farm	2006-2007	Circuit Court of Hancock	06-0153	Scott Corlew	Report
			County, Mississippi		Bryan, Nelson, Schroeder, Castigliola & Banahan	
10	Best v. State Farm	2006-2007	District Court for Southern	1:06cv00074	Ben Mullen	Report
			District of Mississippi,		Bryan, Nelson, Schroeder,	
			Southern Division		Castigliola & Banahan	
11	Mullins v. State Farm	2006-2007	Unknown	Unknown	Michael McCabe	Report
					Allen, Cobb, Hood &	
40	0 0 1	2007	D: 1: 10 11 0 II	105 151	Atkinson	Б .
12	Green v. State Farm	2007	District Court for Southern	1:06cv451	Dion Shanley	Report
			District of Mississippi, Southern Division		Hickman, Goza & Spragins	
13	Lucore v. State Farm	2007	District Court for Southern	1:06cv629	Dion Shanley	Report
.			District of Mississippi,	1.000,027	Hickman, Goza & Spragins	
			Southern Division		, 1 1 1 3 3 3	
14	Chapoton v. State Farm	2007	District Court for Southern	1:06cv471	Dion Shanley	Report
			District of Mississippi,	1	Hickman, Goza & Spragins	Deposition
		00:-	Southern Division			
15	Lott v. State Farm	2007	District Court for Southern	1:06cv519	Dion Shanley	Report
			District of Mississippi,		Hickman, Goza & Spragins	
			Southern Division	1.06 752	Ernie Schroeder	Report
16	Richard v. State Farm	2007	II JISTIICI (COLITI TOT SOLITAATA	1:116037/54		
16	Richard v. State Farm	2007	District Court for Southern District of Mississippi,	1:06cv753	Bryan, Nelson, Schroeder,	Керип

No.	Case	Year	Court	Case #	Lawyer	Activity
17	Illing v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:06cv513	Dion Shanley Hickman, Goza & Spragins	Report
18	Laborde v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:06cv521	Michael McCabe Allen, Cobb, Hood & Atkinson	Report
19	Eagan v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:06cv704	Dion Shanley Hickman, Goza & Spragins	Report
20	Marion v. State Farm	2007-2008	District Court for Southern District of Mississippi, Southern Division	1:06cv969	Vincent Castigiola Bryan, Nelson, Schroeder, Castigliola & Banahan	Report
21	Owen v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:06cv617	Vincent Castigiola Bryan, Nelson, Schroeder, Castigliola & Banahan	Report
22	Daudert v. State Farm	2007-2008	District Court for Eastern Michigan	2:06cv13269	Doug Foster Webb, Sanders & Williams	Report
23	Willis v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:06cv902	Dion Shanley Hickman, Goza & Spragins	Report Deposition
24	Gagne v. State Farm	2007-2008	District Court for Southern District of Mississippi, Southern Division	1:06cv711	Doug Foster Webb, Sanders & Williams	Report Deposition
25	Huynh & Nguyen v. State Farm	2007-2008	District Court for Southern District of Mississippi, Southern Division	1:06cv1061	Doug Foster Webb, Sanders & Williams	Report
26	Luffey v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:06cv901	Doug Foster Webb, Sanders & Williams	Report Deposition
27	Roberts v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:06cv1022	Doug Foster Webb, Sanders & Williams	Report
28	Travers v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:06cv1102	Doug Foster Webb, Sanders & Williams	Report
29	Adams v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:06cv864	Doug Foster Webb, Sanders & Williams	Report
30	Lawler v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:07cv104	Dion Shanley Hickman, Goza & Spragins	Report
31	Palermo v. State Farm	2007-2008	District Court for Southern District of Mississippi, Southern Division	1:06cv905	Vincent Castigiola Bryan, Nelson, Schroeder, Castigliola & Banahan	Report
32	Barber v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:07cv37	Vincent Castigiola Bryan, Nelson, Schroeder, Castigliola & Banahan	Report
33	Benjamin v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:06cv1132	Vincent Castigiola Bryan, Nelson, Schroeder, Castigliola & Banahan	Report
34	Gurrisi v. State Farm	2007	Circuit Court of Hancock County, Mississippi	05-378	Michael McCabe Allen, Cobb, Hood & Atkinson	Report
35	Cates v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:07cv61	Doug Foster Webb, Sanders & Williams	Report

No.	Case	Year	Court	Case #	Lawyer	Activity
36	Myers v. State Farm	2007-2008	District Court for Southern District of Mississippi, Southern Division	1:07cv52	Doug Foster Webb, Sanders & Williams	Report
37	Hoang v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:07cv475	Mindy Johnson Allen, Cobb, Hood & Atkinson	Report
38	Benfatti v. State Farm	2007-2008	District Court for Southern District of Mississippi, Southern Division	1:07cv14	Michael McCabe Allen, Cobb, Hood & Atkinson	Report
39	Vaughn-Winfree v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:07cv76	Doug Foster Webb, Sanders & Williams	Report
40	Sekul v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:07cv369	Michael McCabe Allen, Cobb, Hood & Atkinson	Report
41	Timidaiski v. State Farm	2007-2008	District Court for Southern District of Mississippi, Southern Division	1:07cv464	Dion Shanley Hickman, Goza & Spragins	Report
42	Perronne v. State Farm	2007-2008	District Court for Southern District of Mississippi, Southern Division	1:07cv650	Doug Foster Webb, Sanders & Williams	Report
43	Ridgeway v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:07cv561	Doug Foster Webb, Sanders & Williams	Report
44	Schaefer v. State Farm	2007	District Court for Southern District of Mississippi, Southern Division	1:07cv959	Dion Shanley Hickman, Goza & Spragins	Report
45	Peters v. State Farm	2007-2008	District Court for Southern District of Mississippi, Southern Division	1:07cv67	Dion Shanley Hickman, Goza & Spragins	Report
46	Coca Cola Enterprises v. Carl E. Woodward, LLC	2007-2008	24th Judicial District Court for the Parish of Jefferson State of Louisiana	635-290	Richard S. Vale Blue Williams, LLP	Report Deposition

Appendix B—WRF Specifications

Parameterization Schemes

Schemes	Run 1	Run 2	Run 3	Run 4
FDDA	yes	yes	no	yes
Initialization	20km RUC	20km RUC	20km RUC	32km NARR
Microphysics	WSM 5-class	WSM 5-class	WSM 5-class	WSM 5-class
Longwave	RRTM	RRTM	RRTM	RRTM
Radiation				
Shortwave	Dudhia	Dudhia	Dudhia	Dudhia
Radiation				
Convective	Kain-Fritsch*	Kain-Fritsch*	Kain-Fritsch*	Kain-Fritsch*
PBL	YSU	MYJ	YSU	YSU
Surface	Noah	Noah	Noah	Noah
Nesting	1-way	1-way	1-way	1-way

^{*}Applied for outer grid only.

Appendix C—Wind Tunnel Specifications

Wind Tunnel Setup

1	
Scale	1:5000
Upwind Roughness Height (in)	0.5
Trip Height (in)	11
Number of Spires	5
Spire Height (in)	36
Test Directions	45, 67.5, 90

Profile Measurement Heights

Model Scale (in)	Full-Scale (m)
0.15	18.9
0.30	37.9
0.55	69.4
1.19	150.3
2	252.5
3.33	420.5
4.75	600
24	3030.3

Profile Locations

I TOTTIC .	Locations			
Test				Distance from
Point	Test Point Name	Latitude	Longitude	Point 01(km)
	Witch Fire			
01	Initiation	N33° 04' 59.48"	W116° 41' 37.64"	0
02	3km NE	N33°06'07.20"	W116°40'15.60"	3
03	3km ENE	N33°05'34.82"	W116°39'45.67"	3
04	3km E	N33°04'58.80"	W116°39'39.60"	3
05	4.7km ENE	N33°05'37.18"	W116°38'40.51"	4.7