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1	ZACH COWAN, City Attorney	SBN 96372		
2	ZCowan@ci.berkeley.ca.us BERKELEY CITY ATTORNEY'S OFFICE			
3	Berkeley, CA 94704			
4	FAX.: (510) 981-6960			
5	LESTER LAWRENCE LESSIG III (Appearance Pro Hac Vice)			
6	1563 Massachusetts Avenue Cambridge, MA 02138			
7	ROBERT CHARLES POST	SBN 111917		
8 9	Robert.post@yale.edu 265 East Rock Road New Haven, CT 06511			
10	AMANDA SHANOR (Appearance Pro Hac Vice)			
11	Amanda.shanor@gmail.com 127 Wall St			
12	New Haven, CT 06511			
13	CITY OF BERKELEY and CHRISTINE DANIEL			
14	UNITED STATES DISTRICT COURT			
15	NORTHERN DISTRICT OF CALIFORNIA			
16	CTIA – THE WIRELESS ASSOCIATION,	NO. C15-02529 EMC		
17	Plaintiff, vs.	DECI AR ATION OF ANTHONY B		
18	CITY OF BERKELEY, CHRISTINE	MILLER IN OPPOSITION TO PLAINTIEF'S MOTION FOP		
19	DANIEL, CITY MANAGER OF CITY OF BERKELEY,	PRELIMINARY INJUNCTION		
20	Defendants.	DATE: August 20, 2015 TIME: 1:30 p m		
21		CTRM: 5, 17 <sup>th</sup> Flr, San Francisco		
22	I, Anthony B. Miller, declare:			
23	1. I am a Professor Emeritus in the Dalla Lana School of Public Health, University			
24	of Toronto, Canada. I am a physician and epidemiologist specializing in cancer etiology,			
25	prevention, and screening.			
26	2. I am a Medical Doctor (MD), Fellow of the Royal College of Physicians (FRCP),			
27	Fellow of the Royal College of Physicians of Canada (FRCPC), Fellow of the American College			
28	of Endocrinology (FACE), and Fellow of the Faculty of Public Health (FFPH).			
	1 DECLARATION OF ANTHONY B MILLER			
	USDC C15-02529 EMC			

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1	3.	I have been active in cancer research for over 50 years and have performed		
2	research on ionizing radiation and cancer, electromagnetic fields and cancer, and other aspects of			
3	cancer causat	cancer causation.		
4	4.	I have served on many committees assessing the carcinogenicity of various		
5	exposures, in	exposures, including working groups of the International Agency for Research on Cancer		
6	(IARC) in Lyon, France, which is the cancer research agency of the World Health Organization.			
7	5.	I was a visiting senior scientist in the Monographs program at IARC from		
8	September 2011 until January 2012, where as part of my duties I reviewed the scientific			
9	literature that was used by a working group to designate radio frequency (RF) fields as a class 2B			
10	carcinogen, that is, a possible human carcinogen.			
11	6.	Electromagnetic radiation can be either ionizing or non-ionizing.		
12	7.	RF radiation is non-ionizing radiation.		
13	8.	The harm and the mechanism of harm from ionizing radiation are now well		
14	understood, yet it took many years for the full extent of the hazard in terms of cancer induction			
15	to be recognized. Further, the induction of cancer by ionizing radiation may also be influenced			
16	by other factors, e.g. age of exposure for breast cancer, and whether the person exposed smokes			
17	for lung cancer.			
18	9.	The harm and the mechanism of harm from non-ionizing radiation, particularly		
19	RF, is less well understood, in part because RF fields have been a focus of research for far less			
20	time.			
21	10.	Non-ionizing radiation can create harm through thermal effects, usually only in		
22	high dosage.			
23	11.	There is an increasingly clear body of evidence that non-ionizing radiation can		
24	create harm t	hrough non-thermal effects as well. Convincing evidence is summarized at the		
25	following sources:			
26		a. Cindy Sage & David O. Carpenter, Editors, <i>BioInitiative Report: A Rationale</i>		
27	for a Biologically-Based Public Exposure Standard for Electromagnetic Radiation, BioInitiative Working Group (Dec. 31, 2012),			
28		www.bioinitiative.org.		
		2		
		DECLARATION OF ANTHONY B. MILLER USDC C15-02529 EMC		

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1	b. P.S. Deshmukh, K. Megha, B. D. Banerjee, R.S. Ahmed, S. Chandna, M.P. Abegaonkar & A.D. Tripathi, <i>Detection of Low Level Microwave Radiation</i>	
2	Induced Deoxyribonucleic Acid Damage Vis-à-vis Genotoxicity in Brain of Fischer Rats, Toxicology International 20(1):19-24 (Jan. 2013), available at	
3	http://www.ncbi.nlm.nih.gov/pubmed/23833433?dopt=Abstract.	
4 5	c. E. Karaca, B. Durmaz, H. Aktug, T. Yildiz, C. Guducu, M. Irgi, M.G. Koksal, F. Ozkinay, C. Gunduz & O. Cogulu, <i>The Genotoxic Effect of Radiofrequency Wayes on Mouse Brain</i> , Journal of Neuro-Oncology	
6	106(1):53-8 (Jan. 2012), <i>available at</i> http://www.ncbi.nlm.nih.gov/pubmed/21732071?dopt=Abstract.	
7	12. Of interest is an increased concern about cancer.	
8	13. Since the IARC review in 2011, which identified RF fields as a possible human	
9	carcinogen, there had been a number of epidemiologic studies that have been reported.	
10	14. In my view, and that of a number of colleagues who have co-authored papers with	
11	me on this issue, these studies reinforce the evidence that RF fields are not just a possible human	
12	carcinogen but a probable human carcinogen, putting it in the IARC category 2A.	
13	15. One of the most important of the recent studies was a study in France, a large	
14	case-control study, which found a doubling of risk of glioma, the most malignant form of brain	
15	tumor, after two years of heavy exposure to cell phones. After five years it was five times the	
16	risk. They also identified the fact that in those who lived in urban environments, where there are	
17	probably a number of other carcinogens that could impact upon brain tumors, the risk was even	
18	higher.	
19	16. As an epidemiologist who has done a great deal of work on breast cancer, one of	
20	the most concerning factors that have come to light recently is a series of case reports, starting	
21	with some reports from California. In all, there are now seven case reports of women who	
22	developed unusual breast cancers in the exact position where they kept cell phones in their bras.	
23	These are unusual tumors. They are multifocal, which means they occur in several places in the	
24	breast. The pattern of these cancers seems to mirror where the cell phone was being kept. The	
25	radiation from the cell phone seems to have increased in these women the risk, which they	
26	presumably already had, of developing breast cancer. They were all relatively young women.	
27	This is a most unusual occurrence that must concern us greatly.	
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1	17. RF fields have been associated not only with brain cancers but also parotid gland
2	tumors, tumors of the parotid salivary gland. There have been several instances of people who
3	have developed these cancers. In Israel recently a study identified increasing risk of these
4	cancers, particularly with increasing exposure.

5 18. This research demonstrates that there is no simple difference between ionizing
6 and non-ionizing radiation, such that only the former has any biological effects, beyond thermal
7 effects.

8 19. In my opinion, it is the state of the field today that the evidence suggests a
9 significant range of biological effects, including harmful effects, from non-ionizing radiation.
10 These effects provide ample reason for governments to take steps to reduce exposure to RF
11 radiation.

I declare under penalty of perjury that the foregoing is true and correct to the best of my
knowledge. This declaration was executed on this 28th day of June, 2015, in Waterford,
Ireland.

Viller ANTHONY B. MILLER DECLARATION OF ANTHONY B. MILLER USDC C15-02529 EMC