

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF PUERTO RICO

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JUANITA SANCHEZ (ON BEHALF OF MINOR  
CHILD DEBORA RIVERA-SANCHEZ) *et al.*,

Plaintiffs,

VS.

Case No. 3:09-cv-01260-SEC

UNITED STATES OF AMERICA, *et al.*,

Defendants.

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**AFFIDAVIT OF DR. CARMEN ORTIZ ROQUE**

Puerto Rico

Puerto Rico

Before me, the undersigned Notary, personally came and appeared Dr. Carmen Ortiz Roque, who after being first duly sworn and stated as follows:

My name is Dr. Carmen Ortiz Roque and I have personal knowledge of the matters contained within this Affidavit. I am an epidemiologist and physician in San Juan, Puerto Rico, and specialize in Obstetrics and Gynecology. I hold of Bachelor of Arts Degree from Vassar College, a Master of Science Degree in Biology and a Doctor of Medicine Degree, both from the University of Puerto Rico, and a Master of Public Health Degree from the Harvard University School of Public Health. I am Board Certified by both the American Board of Obstetrics and Gynecology and the National Board of Medical Examiners.

I have personally conducted studies on the island of Vieques including the following:

1. In 1999, I conducted a Pilot Hair Study regarding Heavy Metals in the People of Vieques. The people of Vieques tested in this study ranged from 3 to 65 years of age. Detailed medical and occupational histories gathered for each subject. Hair Samples were collected and the samples were analyzed by the Mayo Clinic Toxicology Laboratory and Trace Pac Element International. The findings of this study revealed: a) that 44% of the subjects tested had toxic levels of mercury, b) that Lead was also found in subjects at toxic levels, c) that those 40 years of age and older are at increased risk for mercury contamination, d) that 83% of the subjects who were Navy civilian workers had toxic levels of mercury or lead, and e) that Civilian workers had a 2.5 times higher chance of contamination by mercury and/or lead than people with other jobs. The results confirmed heavy metal contamination to be prevalent in Navy civilian workers. Source: EXEGESIS, September 14, 2000.

2. In 2000, I conducted hair testing for heavy metals in the Civilian Population of Vieques, Puerto Rico. The selection of subjects was completely voluntary for Vieques residents and there was no exclusion criteria of the subjects tested. Extensive medical, occupational and residential histories were taken of the subjects. The findings of this study revealed: a) that 45% of all subjects showed toxic levels of mercury, b) 13 % of all subjects showed toxic levels of lead, and c) 4% of all subjects were contaminated with cadmium. Chronic exposure to heavy metals was evident. Source: June 2000 Testing of Civilian Population, Vieques, Puerto Rico, Carmen Ortíz Roque, M.D., M.P.H., M.S.

3. In February 2001, I conducted an analysis of Disease and General Morbidity. The published Vital Statistics Report and Bulletins provided data in March 2000. The data covered 1991-1998 and 225,036 death certificates. The age adjusted mortalities were calculated; Puerto Rico was used as the standard. The age-adjusted mortality for the people of Vieques was 9% higher from 1991-1994 and 18% higher from 1994-1998. The analysis showed that this increase was statistically significant. The analysis also showed that deaths from disease in Vieques are greater than the rest of Puerto Rico. Significantly higher-than-expected deaths than the rest of Puerto Rico were observed in Vieques due to: a) Cancer - 30% b) Hypertension – 381% C) Cirrhosis — 95%, and d) Diabetes -41%. Source: February 2001 Analysis, Carmen Ortiz Roque, M.D., M.P.H., M.S.

4. In 2001, I conducted a study regarding infant mortality in Puerto Rico including Vieques. This study revealed that the Infant mortality rate has been decreasing in Puerto Rico for 50 years; however, the infant mortality rate has been increasing on the Island of Vieques since 1980. The Findings from this study also revealed that from 1990 – 1994 the average infant mortality rate on Vieques was 19.9 per 1000 live births which is 55% higher than Puerto Rico. The average infant mortality rate in Puerto Rico was 12.8 per 1000 live births. Also it was found that Vieques has 33% higher low birth-weight babies and pre-term deliveries. Source: February 2001 Analysis, Carmen Ortiz Roque, M.D., M.P.H., M.S.

5. In 2001, I conducted a study to determine the presence of heavy metals in the hair of humans on the Island of Vieques. The study revealed: a) that 73% of the subjects tested were contaminated with aluminum, b) that 30% of children 0 to 10 years of age showed toxic levels of mercury, and c) that 38% of the subjects between 20 and 30 years

of age had toxic levels of mercury. Source: Carmen Ortíz Roque, M.D, M.P.H., M.S., May 2001, Physician, Obstetrics and Gynecology, Ashford Presbyterian Hospital and Auxilio Mutuo Hospital, San Juan, Puerto Rico and President, Environmental Health Committee, College of Physicians and Surgeons of Puerto Rico

6. In 2003, our peer reviewed study was published that demonstrated mercury contamination in reproductive-aged women in Vieques. Teratogenic amounts of mercury can avidly cross human placenta causing permanent neurological impairment to the developing fetus. As many as 26.7% of the women of reproductive age tested in Vieques' island had mercury levels that were unsafe for a developing human fetus. In contrast, mercury exposure of reproductive age women tested in the coastal Northeast of Puerto Rico did not differ from the ones tested in the continental United States, 6.6 and 7 % respectively. The reference Laboratory was blind as to the origin of the samples. Occupational, medicinal, cosmetic and religious practices failed to reveal other possible sources of mercury contamination. Mercury is among the 102 violations to effluent water quality per parameters committed by the U.S. Navy in the coast of Vieques. No other source of mercury contamination has been identified on the island of Vieques. Source: 2004 J Epidemiol Community Health, Carmen Ortiz Roque, Yadiris, Lopez-Rivera.

After personally reviewing in excess of 2,000 individuals' medical records and evaluating over 7,000 medical substantiation forms, I am alerted to the fact that the population of Vieques is the sickest population that I have ever confronted. I am firmly convinced that the environmental pollution left from the military activities on the island is a significant contributing factor to many of the diseases of the individuals living on the island, and is reflected on a case by case basis as reflected in the medical evaluation

forms in each patient's medical file.

It is evident that the human population of Vieques has been exposed and metabolized toxic substances that are generated by the military activities of the Navy. The mere presence of toxic levels of mercury constitutes disease as it becomes a burden to the target organs: the brain, the cardiovascular system, the kidney and, most tragically, to the developing fetus.

FURTHER, AFFIANT SAYETH NOT.

  
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Dr. Carmen Ortiz Roque  
*June 10/2009*

Puerto Rico

Puerto Rico

I, the undersigned Notary Public, in and for the jurisdiction aforesaid, hereby certify that Dr. Carmen Ortiz Roque, whose name is signed to the foregoing Affidavit, and who is ~~known to me~~ *identified through valid driving permit issued by the Commonwealth of PR*, acknowledged before me on this day that, being informed of the contents of said Affidavit, that she executed same voluntary on the day the same bears date.

Given under my hand and seal this the 9<sup>th</sup> day of June, 2009.



  
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Notary Public

My Commission Expires: (Does not apply)