## STATE OF COLORADO COUNTY OF ARAPAHOE

NOW COMES BEFORE ME, Notary Public, John Paul Rossie, a person of the age of majority who is known to me or who has provided sufficient identification, who after being duly sworn, does depose and say:

I am the Executive Director of the Blue Water Navy Vietnam Veterans Association (BWNVVA). I am also a former petty officer in the United States Navy and served aboard ship in the territorial seas of Vietnam during the Vietnam War.

Along with the late Wallace Ward, I authored a study of the presence and effects of Agent Orange (AO) in the harbor of Da Nang in the former Republic of Vietnam known as the Da Nang Harbor Report (hereinafter DNHR).

The DNHR is a compilation of predominantly 'primary source' documents assembled to tell the story of the massive dioxin contamination which occurred at and around the Da Nang Airbase during the 1960s and 1970s. Given that Da Nang was one of two primary points of activity for the Ranch Hand Herbicide Spray Project, the environment of Da Nang and the Harbor itself was contaminated with the herbicide Agent Orange and its by-product, dioxin (TCDD).

DNHR walks the reader through the documented history regarding a number of concerns related to Agent Orange/Dioxin contamination. By reading the original reports and considering them in the context of current problems, the Report provides a valid basis for claiming direct exposure to Agent Orange/Dioxin by anyone who was in Da Nang Harbor between 1962 and 1975.

In addition to the exposure element, the VA has begun using the concept of "bioavailability," and it is relevant to note that the Agent Orange/Dioxin (AO) in and around Da Nang was in a bioavailable form at all times in all stages; liquid, gaseous and in water. Our studies have shown that it did not immediately deteriorate in sunlight (as erroneously reported), and there is no known dilution level at which it is "safe" to ingest dioxin (Maximum Contaminant Level [MCL]). That is, there is no known level at which no adverse health effects are likely to occur. This is called the Maximum Contamination Level Goal (MCLG). The Environmental Protection Agency arbitrarily enforces an MCL of 30 parts per quintillion (10 to the 15<sup>th</sup> power) as it relates to dioxin.





The original reports and discussions used in the DNHR were created during the 1960s and 70s between and among the military (including the chemical corps) and civilian research personnel involved with Ranch Hand and the use of herbicides throughout Vietnam. These writings paint a clear picture of leakage, spillage, atmospheric saturation and ongoing problems caused by the destructive effects of the herbicide and its dioxin contaminant that plagued the Da Nang area. The DNHR conclusions have been validated and are in consonance with the recent United States involvement in extensive and costly remediation of the exact land-based locations discussed in the Da Nang Harbor Report. The Report was not prophetic in nature; it merely peeled back the layers of previous error, deception and cover-up that finally exposed these issues to be real concerns needing immediate solutions.

The information for the DNHR was compiled by members of the Blue Water Navy Vietnam Veterans Association (BWNVVA), as a result of their extensive research into documentation of herbicide use in South East Asia. The electronic Documentation Library located on the BWNVVA Website <u>http://www.bluewaternavy.org/documentspage.htm</u> began with the document collection of two members who scoured government archives to unearth all they could on the subject. Other BWNVVA members and affiliated organization in the United States and Canada subsequently began adding documents to the collection, some which had seen very little circulation among the wider population of worldwide herbicide-dioxin researchers.

To my knowledge, there has never been scientific or medical refutation of the facts reported in the DNHR. Quite the opposite has occurred. Most of the findings have been proven true. Despite that fact, the Department of Veterans Affairs (VA) continues to deny or explain away what is on record. This has allowed them to ignore factual evidence with groundless assertions or outright misinformation.

Since the DNHR was released in April, 2011, there have been several important events that have taken place regarding our knowledge of the extreme levels of dioxin contamination in Da Nang Harbor. In particular, a massive remediation project costing the US Government tens of millions of dollars is nearing completion on the very spot that the DNHR identified as the highest polluted area: just off the north end of the runway where Agent Orange was stored and where the Ranch Hand planes were loaded and washed down daily during their years of operation.

Another important event was locating a drainage ditch that ran from the area of the Airbase tarmac where the Agent Orange herbicide was stored and mixed down to the Harbor. There is now documentation that this ditch was the object of Seabee construction and maintenance operations specifically to move the rinse-down contamination away from the Ranch Hand area of operation. This liquid run-off was engineered to flow directly into Da Nang Harbor. During the late 1970s and 1980, the drainage ditch was re-routed to allow for construction between the former Airbase and the water's edge, and was run through buried culverts, which are shown on many of the remediation layout maps.

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The ditch that acted as a direct drainage route from the end of the runway to the Harbor water is the smoking gun. Because this ditch was maintained for the purpose of conveying contaminated water directly into the harbor, it is not a matter of "if" any run-off happened to carry AO through the ditch to the harbor. It is precisely a matter of the ditch being put into place and maintained for the sole purpose of carrying AO run-off, and any other water, to the harbor.

Currently, there is an open ditch running from the tarmac to Sen Lake. A buried culvert from Sen Lake runs to a point just short of the entry of a local spillway into Da Nang Harbor. In 1969 the ditch went directly to the harbor. In later years, the buried culvert re-routed the flow from Sen Lake to the Harbor. Irrespective, the Agent Orange dioxin reached the Da Nang Harbor. This ditch was designed and built for that purpose by the United States military and was maintained by the Navy Seabees during the intervening years.

Although the precise quantity of dioxin that entered the harbor from the tarmac is unknown, the quantity is irrelevant to the issue. As discussed above, any level of dioxin is a health concern.

Without question, the constructed drainage project proves that dioxin had a purposeful and direct route into the harbor water. No exact metrics are possible at this time and cannot be ascertained more than forty years later. As noted by the Institute of Medicine in their 2011 report, ascertaining a specific quantity is not possible at this late date, any more than ascertaining the quantity that contaminated the soil is possible. While some Agent Orange dioxin could be identified by taking core samples from the harbor bottom, as was done in Nha Trang Harbor, I am aware of no such study that has been undertaken in the Da Nang Harbor. The entire concept of "presumption of exposure," based on the 1991 Agent Orange Act, is based on the fact that precise quantitative measurements cannot be stated for anyone's exposure, whether land based, inland water based, or sea based. The history of exposure to herbicides in Vietnam has been and will forever continue to be silent on the matter of identified quantity.

The DNHR concluded that while no specific quantity of dioxin entering the harbor could be identified, the evidence was overwhelming that AO infiltrated into Da Nang harbor and that the crews aboard ships entering that harbor were exposed to the dioxin via contamination of the ship's distillation plant as well as inhalation of volatized dioxin. In arriving at our conclusion, Mr. Ward and I accepted as factual the findings of the National Research Centre for Environmental Toxicology (ENTOX) and Queensland Health Services (QHSS) for the Australian Department of Veterans Affairs that the distillation process used by Navy ships did not remove the dioxin but actually enriched it. Notably, this report has now been validated by two separate committees of the Institute of Medicine. Additionally, based on this report and other studies showing an increased incidence of cancer among Royal Australian Navy Vietnam Veterans, greater even than those who fought in country, the Australian government is now granting the presumption of exposure to personnel on any ships which came within a line

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approximately 185 kilometers from the mainland of Vietnam. The DNHR concluded that the crews of ships were exposed to the Agent Orange dioxin via their potable water supply as well as other plausible routes of exposure.

The DNHR report was peer reviewed by Dr. Wayne Dwernychuk, Environmental Scientist (Retired) who was employed by Hatfield Consultants and played a prominent part in the studies of the dioxin contamination at Da Nang. His review/comments and a copy of his curriculum vitae are attached. I certify that the attached review/comments and curriculum-vitae is what were provided to me by Dr. Dwernychuk.

Affiant further sayeth naught-

John Paul Rossie

SUBSCRIBED TO AND SWORN BEFORE ME, Notary Public, this 25<sup>22</sup> day of Morember, 2013.

Notary Public

My Commission expires: 5/16/206

