

## Reference Information

This enclosure is intended to provide additional reference information in support of the introduction and the letter to Secretary McDonough. Each document is indexed with a link to the source material (e.g., “Document Number *n*”). End notes contain comments from the original researcher.

# The Travels of Orange: Additional Reference Information

## “The Paper Trail”

### Reference Information

**Document Number 1:** U.S. Commerce Exports, FT 410 and FT 446. These are the U.S. Commerce Export records proving that 2,4-D & 2,4,5-T and other herbicides were shipped to Panama. They show shipments of herbicides from 1958 through 1989. <sup>i</sup>

**Document Number 2:** Testimony of Mr. Charles Bartlett, an official Detrick employee, who testified under oath for Veteran Donald Jones that 200 Agent Orange barrels were shipped to Panama in 1968 and were left behind. Most barrels of 2,4-D & 2,4,5-T were shipped to Panama without the Orange stripe, but it was still the same contents. <sup>ii</sup>

**Document Number 3:** The Pesticide Review states that 2,4-D & 2,4,5-T Technical brands were shipped to Vietnam in the U.S. Commerce FT410. The same exact document where it also shows that this same exact chemical was shipped to Panama. Search at the link for the words “2,4,5-T”, “Vietnam”, “Panama”, “U.S. Commerce”, “FT 410” and see the connection. The FCPC (Federal Committee on Pesticide Control) kept track of the chemicals production and sales and produced this Pesticide Review report annually. <sup>iii</sup>

**Document Number 4:** OEHL TR-78-92, “The Toxicology, Environmental, Fate, and Human Risk of Herbicide Orange and its Associated Dioxin, by Alvin Young, Captain, USAF, et al.” Air Force Captain Alvin Young wrote a report in 1978 and stated on page V-III that the listed Rainbow chemicals were as stated by the Pesticide Review in the 1970s (see **Document Number 3**). <sup>iv</sup>

**Document Number 5:** Panama Canal's Weed Problem. The Dredging Director asked DC what to use to control the Hydrilla which was interfering with the Canal traffic and DC suggested 2,4-D. 2,4-D also is known to cause cancers.<sup>v</sup>

**Document Number 6:** From the Panama Review of 1968 Spraying of the Swamps. Panama Canal Review paper showing men spraying the swamps to keep the mosquitoes away.<sup>vi</sup>

**Document Number 7:** Camp Lejeune Armed Forces Pesticide Memo of August 1970 letting all know that anything in the FSC Catalog is okay to be used on any and all Federal facilities.

**Document Number 8:** Federal Stock Catalog (FSC) showing that Herbicide Orange was available to any Federal facility to order from the FSC up until 1971 when it was removed from the catalog.

**Document Number 9:** Aberdeen Environmental Sampling of the Panama Canal Zone for chemicals. Aberdeen came down to test for chemicals in the Canal Zone. They found dioxin in the soil at Ft Davis and Corozal in 1976. Their findings were that the Canal Zone was more toxic than testing they had done in the United States.<sup>vii</sup>

**Document Number 10:** Dr. Young's report Investigations into Commercial vs Tactical Herbicides of 2013, he states there is no difference in the dioxin levels between the commercial and tactical brand.<sup>viii</sup>

**Document Number 11:** Cablegram from then State Department Secretary Henry Kissinger asking Panama not to ship on the 400 tons of n-butyl 2,4-D & 2,4,5-T to Cuba (as we were not trading with Cuba at the time).<sup>ix</sup>

**Document Number 12:** “How United States Agricultural Herbicides Became Military and Environmental Chemical Weapons: Historical and Residual Effects”, Kenneth R. Olson, Larry Cihacek. “Agent Orange, used during the Vietnam War, was a synthetic plant growth regulator comprised of equal amounts of 2,4-dichlorophenoxyacetic acid C<sub>8</sub>H<sub>6</sub>Cl<sub>2</sub>O<sub>3</sub> (2,4-D) and 2,4,5-trichlorophenoxyacetic acid C<sub>8</sub>H<sub>5</sub>Cl<sub>3</sub>O<sub>3</sub> (2,4,5-T). TCDD, dioxin, 2,3,7,8-tetrachlorodibenzo-p-dioxin (C<sub>12</sub>H<sub>4</sub>Cl<sub>4</sub>O<sub>2</sub>) was an unintended byproduct of the accelerated combustion process used in the manufacture of dual purposed herbicides containing 2,4,5-T.”

**Document Number 13:** Congressional Hearings on Herbicide Orange in 1978. Dr. Alvin Young, Captain in the Air Force at the time, sat in a Congressional Hearing in 1978 as a witness and was sitting next to the Assistant Surgeon General when the Assistant Surgeon General of the Air Force stated there was NEVER anything special made for Agent Orange. It was ALWAYS a commercial item used tactically in war. Dr. Young knew this to be the fact in 1978. The Dow Medical Director also testified that Orange was a Standard Agricultural chemical in this same hearing that Alvin Young attended.

**Document Number 14:** 1980 Testimony of Alvin Young in front of the EPA. Dr. Alvin Young testified in 1980 under oath that these chemicals that made up Orange were produced commercially.

**Document Number 15:** The Federal Specifications for 2,4,5-T to be used on all Federal facilities updated in 1958, the same year that these chemicals with the “Agent Orange”

nomenclature 2,4-D & 2,4,5-T began shipping to Panama. “Chemically pure 2,4,5-T acid and the butyl acid of 2,4,5-T are used as standards” per the Federal Specifications in 1957. These chemicals were used on ALL Federal facilities as needed, including all bases in the jungles of the Panama Canal Zone.<sup>x</sup>

**Document Number 16:** BUDOC Directive 1959 letting everyone know that Federal and Military specifications are coordinated, they are the same, no difference in the product.<sup>xi</sup>

**Document Number 17:** FM3-3 from Dr. Alvin Young’s collection online about tactical herbicides being produced commercially. Dr. Young would later write for the VA and DoD under contract and say just the opposite.<sup>xii</sup>

**Document Number 18:** Report written by Alvin Young, Military use of Pesticides and Herbicides. Nowhere in this 1970 report does Alvin Young mention the word “tactical herbicides.”<sup>xiii</sup>

**Document Number 19:** EPA Position document on 2,4,5-T 1971.

**Document Number 20:** Panel on Herbicides of the President’s Science Advisory Committee, March 1971. In 1970 the EPA wrote a position paper on 2,4,5-T. In it the EPA says that 2,4,5-T is produced commercially. That the Pesticide Review does not report 2,4,5-T alone, always shipped with 2,4-D.<sup>xiv</sup>

**Document Number 21:** The Federal Register in 1959 records that these chemicals were not known to be toxic to man.<sup>xv</sup>

**Document Number 22:** Prior to the 1958 shipments of 2,4-D & 2,4,5-T nomenclature on the U.S. Commerce Department exports, we see the item called Weed Killers shipped to Panama. Weed Killers is one of the synonymous terms for 2,4-D & 2,4,5-T.

**Document Number 23:** The Pesticide Registration labels for products containing this same dioxin were many over the years. As you can see 2,4-D & 2,4,5-T has many agricultural names and registrations.

**Document Number 24** is Document No. 16 which has been referred to in claims. This is a study from Georgia USDA about the drift of these chemicals up to 35 miles. Any base that used these millions of pounds of 2,4-D & 2,4,5-T anywhere in the Canal Zone routinely could have affected each and everyone who lived in the Canal Zone by drift, by drinking the water, or by coming in contact with dioxin in various ways in our daily work in the Canal Zone.<sup>xvi</sup>

**Document Number 25:** TM 5-629 in 1989. After 1977 the nomenclature on the U.S. Commerce Exports still shipping to Panama changed to the name “Growth Regulators” and “Herbicides.” This document is about herbicides and specifically 2,4-D still shipping to Panama in 1989.<sup>xvii</sup>

**Document Number 26:** Investigations into the Allegations of Agent Orange in the Canal Zone and Panama, 2012. In this report Dr. Alvin Young, writing as a consultant for the VA, states “Agent Orange” was never shipped to Panama; that the Panama veterans have no case; and that there is NO documentation to prove otherwise – *yet has testified there is no difference in the dioxin content between the commercial and tactical version.*<sup>xviii</sup>

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**Document Number 27:** VA and DoD Agent Orange locations, written in 2006. Dr. Alvin Young is the author of the 2006 report written for the DoD which he references in all his reports using his own writings to say that “Agent Orange” was never in other places: Thailand, Korea, Vietnam, Panama, etc., telling us these chemicals were never there and he can find no documentation to tell him otherwise. Dr. Young apparently refuses to acknowledge the U.S. Commerce Exports as proof these chemicals were indeed in many places.

**Document Number 28:** Use of Agent Purple, Agent Orange and Agent Blue on Royal Thai Air Force Base Perimeters in Thailand during the Vietnam War (scirp.org)<sup>xi</sup>

**Document Number 29:** TM 5-629 from 1971. The commercial herbicide was used on base anywhere needed as spelled out in the Technical Manual used by all branches of service.

**Document Number 30:** Dr. Wayne Dwernychuk’s quote from the book The Travels of Orange.<sup>xx</sup>

**Document Number 31:** Olson/Tornoe paper on Long-Term Environmental Impacts of Pesticide and Herbicide Use in Panama Canal Zone

**Document Number 32:** A WIN for a Panama Veteran for herbicide exposure. This veteran submitted the U.S. Exports to win his case.

**Document Number 33:** A DENIAL for a Panama Veteran case, denied for exposure to herbicides after the VA checked with the “Research Team” of which Dr. Young is a consultant. This veteran did not submit the U.S. Exports but relied on the VA’s paid expert Dr. Young to convey that 2,4-D & 2,4,5-T “Agent Orange” was not in Panama.<sup>xxi</sup>

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**Document Number 34:** A Denial for a Panama Veteran case where the VA said they asked the JRSCC if these herbicides were in the Panama Canal Zone and determined based on Dr. Young's DoD-funded report in 2006 that Panama isn't on the list. Dr. Young knows the truth.

**Document Number 35:** A WIN for a Panama veteran. "The Veteran also submitted a list of exports by the United States Government Accountability Office and United States Department of Commerce, which details numerous shipments of herbicides 2,4-D and 2,4,5-T to Panama during his active duty service. See Undated Correspondence received by VA on March 12, 2020; see also March 2020 Representative Statement (summarizing the findings). While these documents do not prove that the Veteran was exposed to herbicides, they do show that herbicides were in Panama at the same time as the Veteran. The Board observes that 2,4-D and 2,4,5-T are included within VA's definition of "herbicide agent" for purposes of establishing presumptive in-service herbicide exposure. See 38 C.F.R. § 3.307(a)(6)."

"A May 2013 memorandum from the United States Department of the Army and Joint Services Records Research Center indicates that there is no evidence that the tactical herbicide Agent Orange was used, stored, tested, or transported to Panama or the Panama Canal Zone. The Board observes, however, that this memorandum is directly contradicted by the reports of the Government Accountability Office and Department of Commerce."

"In light of the above, the Board finds that the evidence is at least in equipoise as to whether the Veteran was exposed to herbicide agents during his active duty service in Panama." <sup>xxii</sup>

**Document Number 36:** A WIN for a Panama veteran.

**Document Number 37:** A WIN for a Panama veteran.

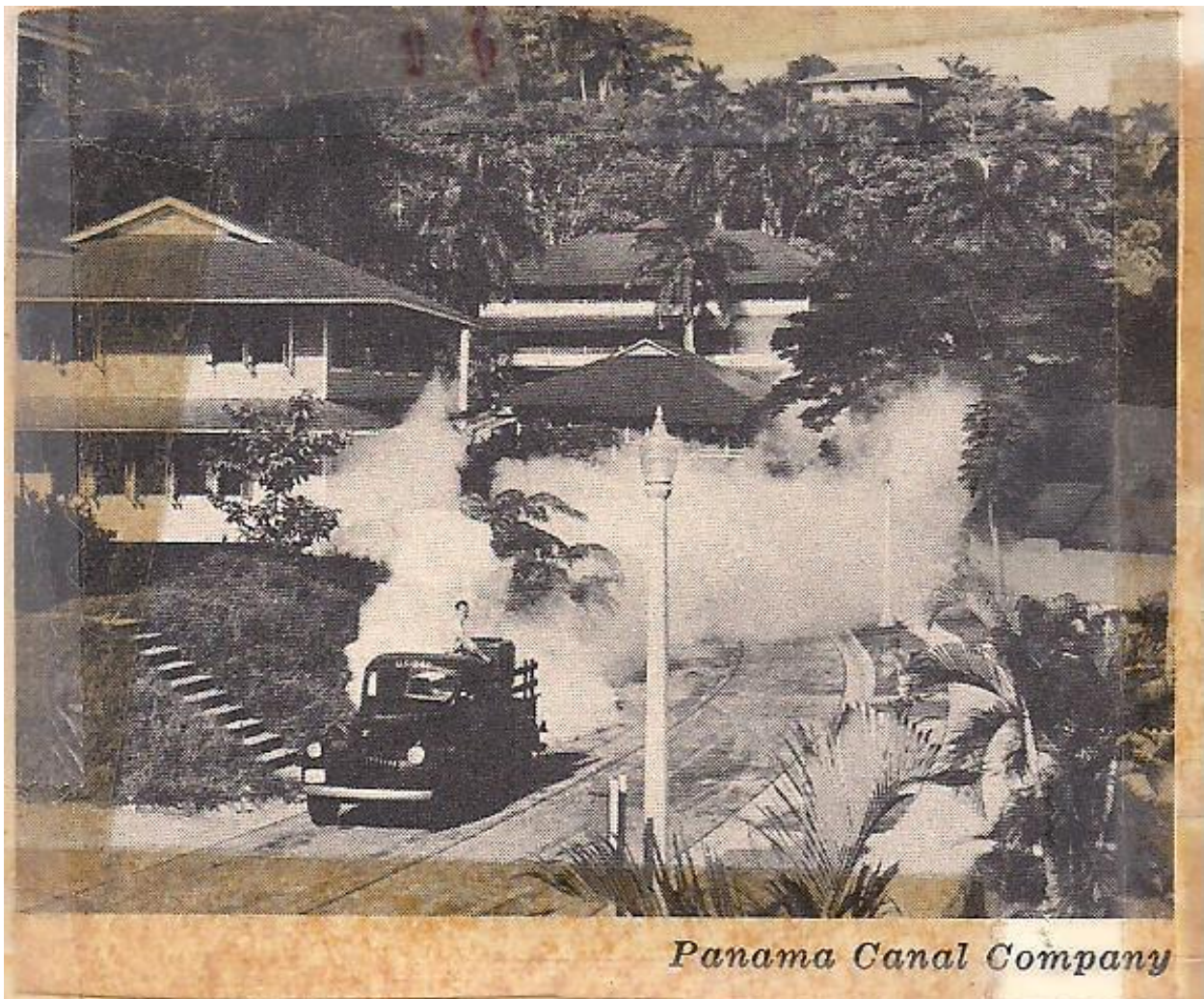
**Document Number 38:** Research information on chemical weapons and nerve agent testing in Panama, plus interviews with people with direct knowledge of Agent Orange in Panama – including another reference to Charles M. Bartlett. Alfredo Smith, a former supervisor for Lockheed-Martin at



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the Corozal warehouse, said he handled a wide range of toxic materials. "We were handling cyanides, asbestos, poisons, known carcinogens, herbicides, pesticides. Some of this stuff had labels going back to the 1950s. All of the stuff from the cleanup sites were coming in to us," he said. Lockheed-Martin provided employees with a list of substances that Mr. Smith and other workers were instructed to be wary of. The list included 2,4-D and 2,4,5-T, the potentially dioxin-tainted chemical compounds that became nicknamed Agent Orange during the Vietnam era. Jerome Steiner, a former Panama Canal employee, said he regularly sprayed Agent Orange in the early 1970s to control vegetation that threatened to clog a crucial river outlet feeding the canal. He and others said the herbicide was not known at the time to be dangerous.<sup>xxiii</sup>

Document Number 39: Photograph of a pesticide truck fogging in an area of Quarry Heights:



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<sup>i</sup> After 1977, the government was still shipping herbicides to Panama, just a different document, and something called “Growth Regulator” which is another herbicide according to these historical records posted here. 2,4-D & 2,4,5-T began shipping on the U.S. Commerce Exports in 1958. Prior they were just called “Weed Killers.” After December 1977, the nomenclature changed again and was called “pesticide preparations, Growth Regulators and Herbicides.”

<sup>ii</sup> And much of it was Agent Purple which had even higher dioxin content from 1948-1965 before Orange came about. An excerpt from the Pesticide Review appears as **Document Number 3**. The full Pesticide Review for the years 1952-1976 can be found here: [#1052 – The Pesticide review. 1952/53-1977. – Full View | HathiTrust Digital Library](#)

<sup>iii</sup> The first document of **Document Number 3** is just a snippet of the whole document so that you can quickly see that these chemicals were being used worldwide and were the same as going to Vietnam. The Pesticide Review folks kept track of the Production and shipments of pesticides throughout the world and they claim throughout their documents 1952-1976 that these military pesticides shipped to all facilities and to Vietnam were shown on the U.S. Commerce Exports, FT410 document. **This proves there was no difference between the herbicides going to Vietnam and to Panama: 2,4-D & 2,4,5-T with unknown amounts of dioxin TCDD.**

<sup>iv</sup> And the Pesticide Review says 2,4-D & 2,4,5-T were shipped to Vietnam on the U.S. Commerce FT 410 Exports. The same exact document shipping 2,4-D & 2,4,5-T also to Panama. Captain Alvin Young prepared this report for the Surgeon General, the very same year he sat in the hearing with the Assistant Surgeon General who stated that there was never anything special made for Agent Orange. Captain Young states in his 1978 report that 2,4-D & 2,4,5-T are commercially made. 2,4,5-T was first produced in 1944. Never once does Captain Young state these were “tactical” herbicides as he does now in his reports to block Panama Canal Zone veterans from benefits they deserve. Dr. Young knew and wrote about the suspension of these chemicals in 1970 by the EPA. He also writes about drift in his 1978 report, stating that these chemicals drift outside their intended target. See **Document Number 24** report by the Georgia USDA on drift stating that **drift of 2,4-D & 2,4,5-T has occurred up to 35 miles.**

<sup>v</sup> **Use of 2,4-D in Gatun began in 1948. Gatun Lake was our potable water resource.**

<sup>vi</sup> The government claims no records were kept of chemical use or they were destroyed after two years, leaving tens of thousands of Panama veterans without a pathway for benefits.

<sup>vii</sup> So why aren't we winning Panama cases? For one, the Regional Level, the first level, is NOT ALLOWED to give the Panama Veterans justice per the VA rules. You can ONLY win at the Board of Appeals level.

<sup>viii</sup> Dr. Young writes in this report in 2013: “THE AGENT ORANGE ACT OF 1991: By the very nature of the title of the Agent Orange Act of 1991, it was at a minimum directed at the two components of Agent Orange, the phenoxy herbicides, 2,4-D and 2,4,5-T, and the dioxin contaminant 2,3,7,8- tetrachlorodibenzo-p-dioxin (dioxin or TCDD) found in 2,4,5-T herbicide. Specifically, in Section 2 (General) of the Agent Orange Act of 1991 (Public Law 102-4), it notes “...a presumption of service connection for diseases associated with exposure to certain herbicide agent...” Under Section 2, subsection (1)(C)(3) “...a veteran...shall be presumed to have been exposed...to an herbicide agent containing dioxin or 2,4- dichlorophenoxyacetic acid...or other chemical compound in an herbicide agent.”

**The historical records and studies by NIOSH and the USAF Occupational and Environmental Health Laboratory confirmed that the levels of 2,3,7,8-TCDD contamination found in the 2,4,5-T used in tactical herbicides and commercial herbicides were the same, i.e., no data were found that indicated that the 2,4,5-T in tactical herbicides contained greater levels of TCDD than their commercial counterpart.** And both the commercial and the tactical brand of 2,4-D & 2,4,5-T were used in Vietnam.

Dr. Young also claims that applicators would not have used the n-butyl ester as it was not available. He claimed prior that is what made Orange Orange, the N-butyl ester. That simply is not true! N-butyl ester has been around and used by the USDA since the 1930s and used widely by the world.

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<sup>ix</sup> Confirming that 400 tons n-butyl ester 2,4-D & 2,4,5-T with unknown amounts of dioxin TCDD were in the Panama Canal Zone in 1976.

<sup>x</sup> Unfortunately for the Panama veterans, their families and the civilians who worked for the Canal Zone, they are told the “Commercial” version could not have harmed the thousands who suffer with cancers, diabetes, heart disease and all the diseases the VA has so far discovered. When the reality is there is ABSOLUTELY NO DIFFERENCE.

<sup>xi</sup> The ONLY difference for the Rainbows was the added stripe.

<sup>xii</sup> Federal Specifications of 2,4,5-T proves that n-butyl ester was the standard from day one. However, later Dr. Young tells everyone in his writings for the VA and DoD that n butyl ester is what made Orange Orange and it was not available to be used commercially. He testified to the truth in 1980 and he was in the hearing with the Assistant Surgeon General in 1978 and heard first hand it was always a commercial product used tactically.

<sup>xiii</sup> 1st Lt. Alvin Young’s report dated March 1970 on Military Herbicides and Insecticides used in the Military. In this report 1st Lt. Alvin Young claims the Military code Agent Orange and Purple have a commercial name called Brush Killer and a common name 2,4-D & 2,4,5-T. He certainly knew here in 1970 that Agent Orange was just a code name. That is why often we see it in parens “Agent Orange” because it really didn’t exist, other than the stripe, the contents were commercially made 2,4-D & 2,4,5-T with UNKNOWN amounts of dioxin (TCDD).

<sup>xiv</sup> The Pesticide Review claims that 2,4-D & 2,4,5-T Technical brand was shipped on the FT 410, U.S. Commerce Records, the same FT410 and U.S. Commerce Records shown on this page that shows 2,4-D & 2,4,5-T Technical brand shipped to Panama Canal Zone. This document was filed in the Alvin Young collection on Agent Orange. The “commercial” version tested of 2,4,5-T turned out to be 27 ppm TCDD!!!

<sup>xv</sup> Yet, we know from the U.S. Commerce Exports that these same “non-toxic” chemicals which caused many diseases and deaths in Vietnam were being shipped as early as 1958 under the 2,4-D & 2,4,5-T nomenclature to both Vietnam and Panama. Proving that these same chemicals used later in the Vietnam war and still shown shipped under the same nomenclature were also shipped and used in the Panama Canal Zone for decades, before, during and after Vietnam.

<sup>xvi</sup> The Panama Canal Zone was a 50 x 10 miles strip of land. With bases on the north and south ends of this strip using these chemicals routinely. No WONDER Aberdeen found the Canal Zone to be more TOXIC than the tests done in the United States. Many are very sick, many are dead, never receiving help from the nation they served.

<sup>xvii</sup> Growth Regulators and Herbicides were being shipped to Panama in 1989. See the Armed Forces Pesticide Manual as of 1989. 2,4-D was still being used, as well as some kinds of herbicides. The Technical Manual of 1989 discusses their use. 2,4-D and herbicides were still being shipped to Panama in the 1980s. It is absolutely astonishing that facts so important to the well-being of multitudes of people are hidden by misinformation of one man, Dr. Alvin Young, who absolutely knows the truth and testified under oath the truth in the past but has rewritten facts for what purpose?

<sup>xviii</sup> Dr. Young seems to have a truth problem; see **Document Number 17**.

<sup>xix</sup> There never was any difference between the commercial and the so-called “tactical” herbicide used in Thailand either. They have made the Thailand veterans to prove they were near the perimeters because the government was told “Agent Orange” would have only been used on the perimeters like in Vietnam.

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<sup>xx</sup> To see Dr. Dwernychuk's CV, please visit Blog Number 8 at <https://agentorangeinpanama.com>.

<sup>xxi</sup> When the VA asks if there is any truth to these chemicals in Panama, they hear back from the DoD report Dr. Alvin Young wrote in 2006 that says the government can find no indication of "Agent Orange" ever being in Panama. The JSRCC (Joint Services Records Research Center) determines that these chemicals were not in Panama based on the 2006 report that Dr. Alvin Young maintains. The Regional level and the VA is absolutely NOT looking at the clear evidence to prove otherwise to the detriment of thousands of Panama Canal Zone veterans.

"The AOJ also requested verification of exposure to herbicides from VA's Compensation and Pension service in connection with a claim filed by the Veteran during his lifetime. A January 2005 response indicated that the Department of Defense "inventory does not contain any instance of herbicide use, testing or disposal in Panama. The RO contacted Compensation and Pension service again in November 2015 in order to request verification of Agent Orange exposure for Fort Kobbe, Panama from April 1968 to February 1969 with the 3rd Battalion, 508th Infantry, as well as the 3rd Battalion 5th Infantry.

The response indicated the Department of Defense list "does not show any use, testing, or storage of tactical herbicides at any area in Panama, including Fort Kobbe, Panama. A recent December 2012 extensive search of historical records revealed no evidence that Agent Orange was ever shipped to, buried, or used anywhere in the Panama Canal Zone. A May 2013 print out of the Herbicide Tests and Storage Outside the US published by VA, did not list Panama as one of the places where herbicides were tested or stored. As a result of the responses from DPRIS and VA's Compensation and Pension service a formal finding of a lack of information required to verify exposure to herbicides during military service was made in November 2015."

If Dr. Young knows there is no difference in the dioxin content and knows the law of the 1991 Agent Orange Act and that millions of pounds of 2,4-D & 2,4,5-T n-butyl ester went to Panama on the U.S. Exports, why is he paid by the VA and the DoD to write just the opposite? He is preventing the Panama Veterans and has prevented countless other veterans groups from getting due justice by his misinformation.

<sup>xxii</sup> Dr. Alvin Young's documents all say in the front that his document is a living document and that if documents are found that can be authenticated, it can be amended but the VA and DoD ignore our cry for help. The Board of Appeals has authenticated these shipment records as proof and a few veterans have won.

<sup>xxiii</sup> "Panama Canal Zone Bases Legacy Chemical Weapons Testing Mustard Gas, Phosgene, Sarin Nerve Gas, Agent Orange Safety Concerns Dod and Cercla." *VA Disability Community via Hadit.com*, 11 Nov. 2022, [community.hadit.com/topic/63290-panama-canal-zone-bases-legacy-chemical-weapons-testing-mustard-gas-phosgene-sarin-nerve-gas-agent-orange-safety-concerns-dod-cercla](https://community.hadit.com/topic/63290-panama-canal-zone-bases-legacy-chemical-weapons-testing-mustard-gas-phosgene-sarin-nerve-gas-agent-orange-safety-concerns-dod-cercla).