James R. Horne

Herbicide Exposure and MS

The list below (from *www.landscaper.net/**agent**2.htm)* indicates number of gallons of herbicide applied by fixed-wing Air craft only.
It does not include any other Ariel (helicopter) or ground spraying, nor does it include Dinoxol, Trinoxol, Diquat, Bromacil, Tandex, Monuron, Diuron, Dalapon,
Agents: **Super Orange**, **Pink**, **Green,** or the worst of them all, Agent **Purple**. However Agent Orange was contaminated with 2,3,7,8-tetrachlorodibenzodioxin (TCDD), an extremely toxic dioxin compound. In some areas, TCDD concentrations in soil and water were hundreds of times greater than the levels considered safe by the U.S. Environmental Protection Agency

I Corps (2,355,322gal)	Orange	White	Blue	Total
Phu Bai	54,300	3,000	120	57,420
Hue	41,395		5,070	46,465
Firebase Jack	140,875	11,900	3,280	156,055
Camp Evans	18,690		880	19,570
Camp Eagle	14,250			14,250
A Shau	53,550	2,550	6,128	62,228
Binh Hoa	8,220		1,600	9,820
III-Corps				
Bien Hoa	35,045	124,525	3,950	163,520
In and Out of Country & staging area for R& R				

(Gallons) Sprayed by Fixed-Wing ONLY sub- totals: 529,328

By 1969, 18 million gallons had been sprayed in All of Vietnam. 4.5 million gallons was sprayed in 1969, of that amount 53% fell on I-Corps. The (above) I-Corps locations that I was in, sustained 22% of those 2,355,322 gallons. Additionally, Agent Orange was also sprayed by helicopters (number of gallons TBD). So in the jungles, swamps, farm land, banana groves, flatlands, A Shau valley, Firebases, mountains and or air bases that I passed through, defended or patrolled, I walked on contaminated soils, containing conservatively, a Grand total of (22% of 18 million) or 3.96 million gallons of herbicides. In addition to walking on this ground, I filled and drank water from my canteens regularly from rivers or streams in the area during most of that time (Approx. 300 days/nights of humping, defending and sleeping in the field). I have no way to estimate what % of these toxic Agents were in that water. **How much herbicide did I drink**?

www.landsscaper.net/agent2.htm

Statistical Summary of Herbicidal Warfare in Vietnam

Credit: H. Lindsey Arison III

Updated Link - Executive Summary
The Herbicidal Warfare Program in Vietnam, 1961-1971

Operations Trail Dust & Ranch hand

10 August 1961 - 31 October 1971
(3,735 days)

SUMMARY BY YEAR

YEAR	TOTAL GALLONS USED
1962	**17,171**
1963	**74,760**
1964	**281,607**
1965	**664,657**
1966	**2,535,788**
1967	**5,123,353**
1968	**5,089,010**
1969 – year James R. Horne in Vietnam	**4,558,817**
Cumulative Sprayed (Fixed-wing) from 1962 through 1969 TOTAL:	**18,145,163**

Data BELOW from Wikipedia, the free encyclopedia:

U.S. Army Huey helicopter spraying Agent Orange over Vietnamese agricultural land.

Agent Orange or Herbicide Orange (HO) is one of the herbicides and defoliants used by the U.S. military as part of its herbicidal warfare program, Operation Ranch Hand,[1] during the Vietnam War from 1961 to 1971.[2] It was a mixture of equal parts of two herbicides, 2,4,5-T and 2,4-D

In mid-1961, President Ngo Dinh Diem of South Vietnam asked the United States to conduct aerial herbicide spraying in his country. In August of that year, the South Vietnamese Air Force initiated herbicide operations with American help. But Diem's request launched a policy debate in the White House and the State and Defense Departments.[1] However, U.S. officials considered using it, pointing out that the British had already used herbicides and defoliants during the Malayan Emergency in the 1950s. In November 1961, President John F. Kennedy authorized the start of Operation Ranch Hand, the codename for the U.S. Air Force's herbicide program in Vietnam.

Agent Orange was manufactured for the U.S. Department of Defense primarily by Monsanto Corporation and Dow Chemical. It was given its name from the color of the orange-striped barrels in which it was shipped, and was by far the most widely used of the so-called "Rainbow Herbicides".[4] The 2,4,5-T used to produce Agent Orange was contaminated with 2,3,7,8-tetrachlorodibenzodioxin (TCDD), an extremely toxic dioxin compound. In some areas, TCDD concentrations in soil and water were hundreds of times greater than the levels considered safe by the U.S. Environmental Protection Agency

Defoliant Usage in I Corps during the Vietnam War

To assist those who have a pending claim with the VA or need to submit a claim to the VA due to illness caused by exposure to defoliants used during the war, we are including the US Air Force Ranch Hand report. This table does not include the exact dates of herbicide spraying at the locales but it does show that virtually every place where 1/5 operated was an area where dioxin-based herbicides were sprayed. While Agent Orange

is the most notorious, other agents, such as Agent Blue, were used. Agent Blue, which was a mix of dioxin and arsenic, was used as a rice crop suppressant. While a great battle was waged over an inordinate amount of time before the VA admitted to any harmful effects from Agent Orange, arsenic has been a known cancer-causing agent since the 1920s. While arson needs to be consumed by eating or drinking a contaminated substance, dioxin need only be touched and it is absorbed through the pores of the skin and it buries itself in the fatty tissue in the body. Arson travels to the extremities of the body, such as the head, fingers and toes. Clinical analysis of a hair follicle from the head can determine exposure to Agent Blue. Our 1/5 Battalion Command, Lt. Col Joe Griffis, recommends that all Marines and Navy Corpsmen who served with 1/5 in Vietnam get an Agent Orange screening at the VA. Hopefully, this information may help 1/5ers in pursuing rightful claims with the VA.

Data contained below this point, was used for Page #1 summary:

Agent Orange Statistics and *Vietnam* War Herbicides

*www.landscaper.net/**agent**2.htm*

Information for *Vietnam* veterans concerning the spraying of herbicides and defoliants during the *Vietnam* War. ... *Map* Room ... The 15,480 drums of *agent orange* stockpiled at the Naval Construction ... *Phu Bai*, 54,300, 3,000, 120, 57,420

I Corps	**Orange**	**White**	**Blue**	**Total**
2,355,322				
A Shau	53,550	2,550	6,128	62,228
An Hoa	6,500	1,800	11,250	19,550
Binh Hoa	8,220		1,600	9,820
Cam Lo	80,375	8,660	12,785	101,820
Camp Caroll	78,200	5,400	5,050	88,650
Camp Eagle	14,250			14,250
Camp Esso	53,410	5,600	5,500	64,510
Camp Evans	18,690		880	19,570
Camp Henderson	68,155	7,040	4,800	79,995
Chu Lai	12,170	4,150	1,598	17,918
Con Thien	84,700	12,460	10,925	108,085
Danang , China Beach	13,800		2,000	15,800
Dong Ha	54,385	5,060	9,925	69,380
Duc Pho, LZ Bronco	46,225	14,400	1,175	61,800
Firebase Jack	140,875	11,900	3,280	156,055
Firebase Rakkassan	150,145	23,900	2,510	176,555
Firebase West	15,405	3,690	18,480	37,575
Hill 63	20,500	3,200		23,700
Hill 69	11,620	4,150	1,598	17,368
Hoi An	17,520	3,000	13,950	34,470
Hue	41,395		5,070	46,465
Khe Sanh, Firebase Smith	43,705	3,040	4,300	51,045
Lang Co Bridge	50,610	5,600	3,500	59,710

LZ Baldy	15,430	3,000	13,950	32,380
LZ Dogpatch, Hill 327	4,490		8,250	12,740
LZ Geronimo	22,535	14,000	468	37,003
LZ Jane, Firebase Barbara	91,150	6,750	3,700	101,600
LZ Sandra	118,780	20,210	24,755	163,745
LZ Snapper, Firebase Leather	11,350		3,000	14,350
Marble, Hill 59	15,405	6,720	18,508	40,633
Phu Bai	54,300	3,000	120	57,420
Phu Loc, LZ Tomahawk	78,250	4,000		82,250
Quang Ngai	25,605		1,800	27,405
Quang Tri, LZ Nancy	68,000	2,750	3,700	74,450

III Corps	**Orange**	**White**	**Blue**	**Total**
Bien Hoa In and Out of Country staging area for R& R and Deros home	35,045	124,525	3,950	163,520

USAF Ranch Hand Herbicides from August 1965
Grand Total in South Vietnam 8,165,491
3/8/1998

Source: www.gmasw.com/ao_amts4.pdf

Note: This does not include the US Army helicopter or ground applications, or any form of the insecticide programs by GVN or the US military. The amount represents gallons within eight (8) kilometers of the area. Thus, each area is 9.6 miles in diameter.

Description	**TCDD (Dioxin) Amounts**
Agent Orange	1.77 to 40 ppm
Agent Blue (Purple)	32.8 to 45 ppm
Agent Red (Pink)	65.6 ppm
Agent White (Green)	65.6 ppm
Silvex	1 to 70 ppm
2,4,5-T (Current)	0.1 ppm or less

ppm = parts per million

See below web site for more spray data:

www.chicagotribune.com/chi-091204-agentorange-map

View spraying missions in Vietnam by date and location

View spraying missions in Vietnam by date and location

U.S. troops, Vietnamese nationals exposed to dangerous chemicals

By Jason Grotto, Chris Groskopf, Ryan Mark, Joe Germuska and Brian Boyer | Tribune staff
Dec. 4, 2009

The map below ((click on)): (www.chicagotribune.com/chi-091204-agentorange-map) can be used to see defoliant spraying missions by U.S. and South Vietnamese forces over Vietnam, as well as Laos and Cambodia. The missions began in summer 1961 and ended more than a decade later, in spring 1971.

Clicking and dragging on the timeline at the bottom of the map lets you view the spraying missions as they took place over months and years. You also can zoom in on a particular town or area by entering its name in the search box. Once you have found the spraying missions you are looking for, you can click on the lines on the map to get more details about the missions, such as the number of legs, or runs, the number of gallons and the type of defoliant.

This interactive map is based on the Herbicide Exposure Assessment-Vietnam database developed by Jeanne Stellman, professor emeritus at Columbia University's school of public health, and Columbia epidemiology professor Steven Stellman. They cleaned data from a 1974 National Academy of Sciences database and supplemented the records with documents from the National Archives. The database is considered the most comprehensive available on spraying missions. The effort was funded by a contract from the National Academy of Sciences to build an exposure model that could be used to assess the defoliants' health impact on U.S. veterans who served in Vietnam. The model has been evaluated twice by the Institute of Medicine, which recommended that the U.S. Department of Veterans Affairs use it to evaluate the chemicals' health impact. The VA has been testing the exposure model since 2003.