

<http://www.frd.org/Voices/AgentOrange.htm>

A good site it seems – lots of info – disturbing pictures.

<https://chriscondello.wordpress.com/2012/12/09/the-rainbow-herbicides/>

The rainbow herbicides consisted of agents pink, green, purple, blue, white, orange, orange 2 and super-orange, these were commonly cut with jet fuel.

Camp Detrick, MD-Fields A,B, and C	1946-1947	2,4,5-T, 2,4,5-T triethanolamine, tributylphosphate, ethyl 2,4-D, butyl 2,4,5-Triet 2,4-D,	The experiments were directed mainly towards the investigation of plant inhibitors applied as sprays or to the soil in the solid form to be taken up by the roots.	Yes
Camp Detrick, MD- Fields C,D, and E	1948	2,4,5-T, isopropyl phenol carbamate, LN-2426, 2,4-D	The experiments were directed mainly towards the investigation of plant inhibitors applied as sprays or to the soil in the solid form to be taken up by the roots.	Yes
Camp Detrick, MD-Fields C,D,E	1949	triethylene. 2,4,5-T, carbamates	The experiments were directed mainly towards the investigation of plant inhibitors applied as sprays or to the soil in the solid form to be taken up by the roots. Experiments were done by Ennis, DeRose, Newman, Williamson, DeRigo, and Thomas.	Yes
Kingston, RI	7/26/1949, 1950-51	trieth.2,4,5-T, butyl 2,4,5-T,974	The experiments were directed mainly towards the investigation of plant inhibitors applied as sprays or to the soil in the solid form to be taken up by the roots. Experiments were carried out under supervision of T.E. Odland if RI State College. H.T. D	Yes
Camp Detrick, MD-Fields A,B,D,E	1950	2464, butyl 2,4-D, 974, butyl 2,4,5-T, q:q 143 and 974	The experiments were directed mainly towards the investigation of plant inhibitors applied as sprays or to the soil in the solid form to be taken up by the roots. Experiments were done by Ennis, DeRose, Acker, Newman, Williamson, and Zimmerly.	Yes
Camp Detrick, MD-Field F	1950-51	2464, carbamate, butyl 2,4-D, 143 and 974 (orange?),2,4,5-T, 2,4-D, Orange	The experiments were directed mainly towards the investigation of plant inhibitors applied as sprays or to the soil in the solid form to be taken up by the roots. Experiments were done by Acker, DeRose, McLane, Newman, Williamson, Baker, Dean, Johnson, T	Yes
Orlando, FL at Army Grove Air Force's Tactical Center	3/14/1944, 4/12/1944	ammonium thiocyanate, zinc chloride, sodium nitrate, sodium arsenate, sodium fluoride	The purpose was to determine means of accomplishing defoliation of tropical forest vegetation by application of a chemical agent.	Yes
Marathon, FL	3/21/1944-3/23/1944	zinc chloride, ammonium sulphamate, ammonium thiocyanate	The purpose was to determine means of accomplishing defoliation of tropical forest vegetation by application of a chemical agent. Spraying was done here.	Yes

Near Lake George, FL	Spring 1944	zinc chloride	The purpose was to determine means of accomplishing defoliation of tropical forest vegetation by application of a chemical agent. Spraying here.	Yes
Near Wayside, Miss., Wilcox Road, Greenville, Miss.	9/19/1967	picloram, bromacil, pyriclor, and terbacil, Orange, cacodylic acid	In 1967, the Dow Chemical Company was awarded a DoD research contract. The objective was to prepare as pellets mixtures of various herbicides and to test them on varying vegetation situations for the control of a range of plant species.	Und
Las Mesas Cerros, Mayaguez, PR	5/24/1968, 5/26/1968, 5/27/1968	picloram, bromacil, pyriclor	In 1967, the Dow Chemical Company was awarded a DoD research contract. The objective was to prepare as pellets mixtures of various herbicides and to test them on varying vegetation situations for the control of a range of plant species.	Und
Fulcher Ranch, Greenville, Mississippi	4/15/1968	picloram and bromicil	In 1967, the Dow Chemical Company was awarded a DoD research contract. The objective was to prepare as pellets mixtures of various herbicides and to test them on varying vegetation situations for the control of a range of plant species.	Und
Replacement raining Center of the Royal Thai Army near Pranburi, Thailand	1964 and 1965	Orange, Purple	An extensive series of tests were conducted by Fort Detrick during 1964 and 1965 in collaboration with the Military Research and Development Center of Thailand. The objective was to perform onsite evaluation of phytotoxic chemicals on vegetation in SE As	Yes
Las Mesas and La Jagua experimental areas at Mayaguez, PR	2/1956-6/1956	2,4,5-T, 2,4-D, pentachloropheno l, ammate, weedazol, endothal Harvestaid, Butyne -1,4-diol	During February to June, 9 chemicals were evaluated in PR on 16 genera tropical woody plants. The chemicals were applied in highly concentrated solutions with a microsprayer to the leaves.	Yes
Guanica and Joyuda, PR	6/1956-9/1956	2,4,5-T, potassium cyanate, amiendo, F-2, 6-Ca-4, Y-F Tree and Brush Kiler, ACP M-118, Shed A-Leaf	9 chemicals were evaluated on 16 genera of tropical woody between June and September. The chemicals were sprayed to duplicate small branches, using a microsprayer.	Yes

Englin Air Force Base, FL	11/1952-12/1952	2,4-D, 2,4,5-T: 143 and 974, respectively	Two trials: Chemical Corps- concerned with basic fundamental work, using 2,4-D, Air Force-concerned with evaluating prototype large capacity spray system for aircraft installation using 2,4,5-T, primarily. Used 3 atomizing nozzles: Bete Fog Nozzles, Whir	Yes
Beaumont, TX	6/1944	LN *phenoxy	Small plot experiments were commenced to test the effectiveness of LN agents. Various trials were done under contract with the USDA, aided by personnel at Camp Detrick. Here, they were testing on rice crops.	No
Bushnell Army Air Field, FL	2/1945	LN *phenoxy	Small plot experiments were commenced to test the effectiveness of LN agents. Various trials were done under contract with the USDA, aided by personnel at Camp Detrick. Here, it was aerial spray experiments on potted plants	Yes
Vigo Plant CWS, Terre Haute, IN	5/1945-9/1945	LN (see attached) *phenoxy	Small plot experiments were commenced to test the effectiveness of LN agents. Various trials were done under contract with the USDA, aided by personnel at Camp Detrick. Here, it was aerial trials spraying field grown plants.	Yes
Jefferson Proving Grounds, Madison, IN	Summer 1945	LN *phenoxy	Small plot experiments were commenced to test the effectiveness of LN agents. Various trials were done under contract with the USDA, aided by personnel at Camp Detrick. Here, it was dropping trials.	Yes
Granite Peak, UT	Summer 1945	LN *phenoxy	Small plot experiments were commenced to test the effectiveness of LN agents. Various trials were done under contract with the USDA, aided by personnel at Camp Detrick. Here, it was dropping trials.	Yes
Avon Air Force Base, FL	2/1951-4/1951	butyl 2,4 D	Trials were conducted at Avon Air Force Base, FL by Chemical Corps with personnel of the Air Force and Navy to determine the practical effectiveness of spraying pure anticrop agents from at low volume from aircraft. C-47 and Navy XBT2D-1 aircraft with var	Yes
Area B, Camp Detrick, MD	Spring/Summer 1953	3:1 mixture 2,4-D and 2,4,5-T	Personnel at Camp Detrick tested the feasibility of using an experimental spray tower for applying a mixture of chemical anticrop agents to broad-leaf crops.	Yes

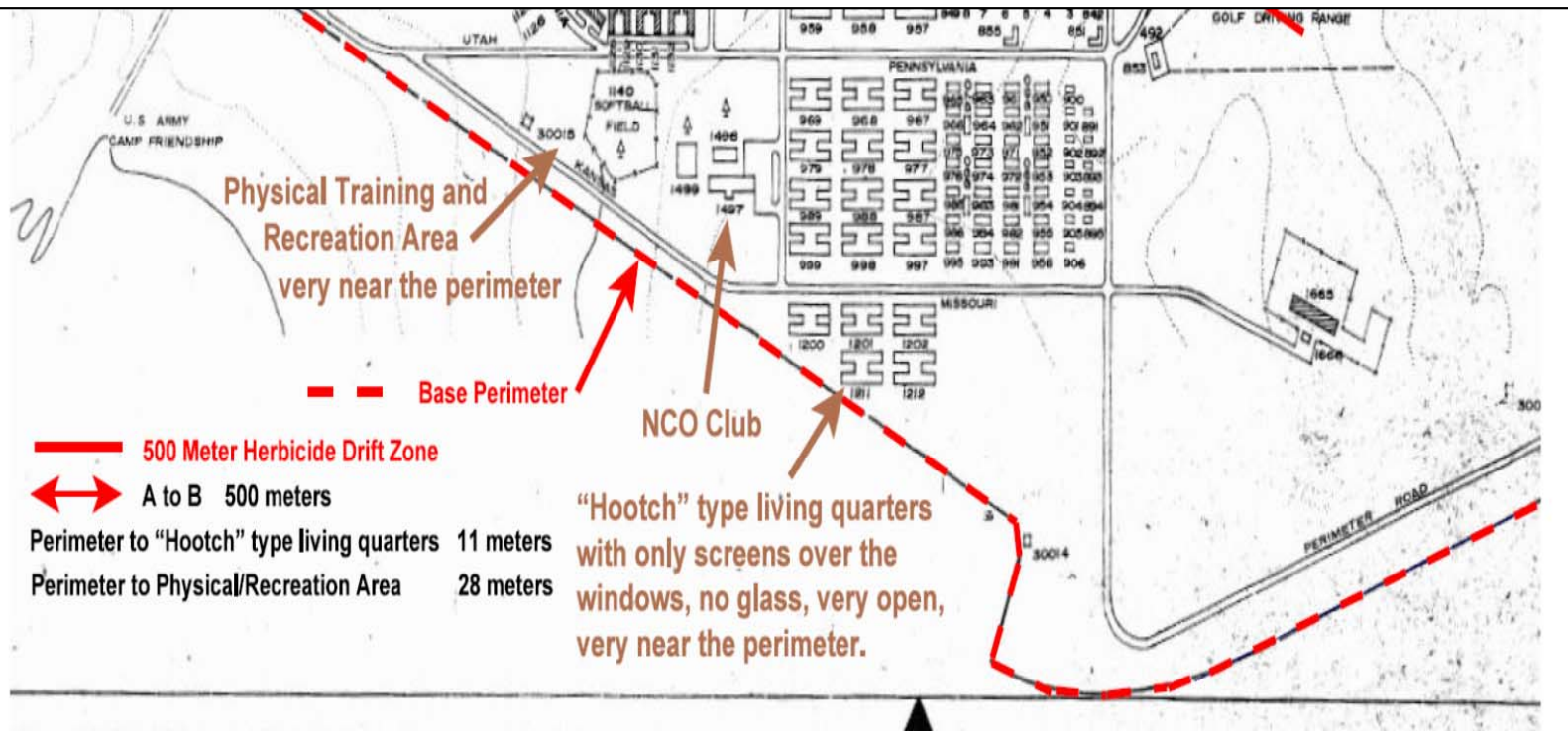
Las Mesas and La Jagua, Mayaguez, Joyuda at Cabo Rojo, and Guanica Insular Forest at Guanica, PR	9/1956-12/1956	6-Ca-4,Liojn Oil,2,4,5-T, B-1613, B-1638, Ammate, V-C1-186, endothal, shed-a-leaf, M-118, Y-F,esteron 2,4-	16 compounds with defoliating properties were evaluated using 28 different tropical woody plants, each representing a separate genus. The chemicals were applied to duplicate small branches with a microsprayer and to single larger branches or whole trees	Yes
Las Mesas and La Jagua, Mayaguez, Guanica Beach, PR	1/1957-3/1957	V-C 3-105, V-C 1-21, V-C 1-443, F-7, TBP, Phillips 713, V-C 3-173	7 compounds were evaluated on 29 different woody plants to determine their effectiveness as defoliants, desiccants, and as killing agents. They were applied with a microsprayer to the upper leaf surfaces of duplicate small branches.	Yes
Las Mesas and La Jagua, Mayaguez, Guanica Beach, PR	4/1957-6/1957	B-1676, B-1638, NP 1098, SD 1369, Ammate, Shed-a-leaf	7 compounds were sprayed on 25 different plants in order to evaluate their effectiveness as defoliants, desiccants, and killing agents. The compounds were applied with a microsprayer to the upper and lower leaf surfaces of duplicate small branches.	Yes
Las Mesas and La Jagua, Mayaguez, PR	7/1957-12/1957	MgClO3, Golden Harvest Defoliant, Dow-M562, F-8, F-9, F-10, F-11, F-12	8 different spray formulations were applied to 16 different tropical trees and shrubs in order to evaluate their effectiveness as defoliants, desiccants, and killing agents.	Yes
Southeastern part of Kompong Cham Province and Dar and Prek Clong plantations, Cambodia	6/1969	Orange	In 6/1969, the US government received notice of charge by Cambodian government that major defoliation damage to the Cambodian rubber plantation near the RVN border had occurred as a result of US defoliation activity. This was confirmed by a team of exper	Yes
State Forest area, 3500 ft.elevation on slope of Mauna Loa, near Hilo, HI	12/2/1966, 12/4/1966, 1/12/1967	Orange, M-3140, TORDON ester, 2,4-D ester, 2,4,5-T ester	The purpose of this project was to evaluate iso-octyl ester of picloram (TORDON) in mixtures with ORANGE, as a candidate defoliant agent, using ORANGE as standard. There were personnel from Fort Detrick there.	Und
Stone Valley Experimental Forest in Huntington County and near State College in Centre County, PA	3/1969-10/1970	bromacil, diuron, tandex, fenuron, picloram	Soil- applied herbicides were studied by the U of Pa with Ft Detrick for 18 months for their effectiveness, rapidity of action, and duration of response in native stands of central PA grasses, broadleaf weeds and woody plants. These herbicides were sprea	Und

Bushnell Army Air Field, Bushnell, FL	2/1945-4/1945	2,4-D and its ammonium salt	Trials, performed by C.W.S. personnel from Camp Detrick, MD tested the practicability of severely injuring or destroying crop plants sprayed from smoke tanks mounted on tactical aircraft.	Yes
Sea	Summer 1977	Orange	In 1977, the USAF incinerated 2.22 million gallons of Herbicide Orange at sea in an operation entitled PACER HO. Extensive industrial hygiene sampling efforts supporting the transfer operations at Gulfport, MS and Johnston Island indicated all exposures	Yes, Gulfport No, JI
Korea, third Brigade, 2nd Division area	7/23/1968-7/24/1968	Hyvar XWS, tandex, Urox B, Urox Oil concentrate (liquids) bromacil, tandex, Urox 22 (solids)	In 1968, chemicals were sent from the Plant Sciences Lab, Ft Detrick, MD, to the Republic of Korea for the purpose of testing their effectiveness in the control of vegetation.	Yes
Marinette, WI, Weslaco, TX	5/1967-1/1969	arsenic compounds, Orange, cacodylic acid, sodium cacodylate	71 new arsenic compounds were tested in primary screening against 6 plant species in greenhouse tests. Then, 5 of the most active compounds were tested in field trials against Red Maple and compared to formulations of cacodylic acid and a 50:50 blend of	Yes
Eglin AFB, FL	6/11/1968-9/12/1968	orange, Bifluid #1, Bifluid#2, Stull Bifluid	A spread factor study was performed by the Army to correlate the spherical drop sizes of both Orange and Stull Bifluid defoliant. It involved development of new techniques to determine spread factors over an extended range of drop sizes. A spinning cup d	Yes
Fort Ritchie, MD	1963	Tordon, 2,4-D, Orange, diquat, endothal, and combinations of each with Tordon	Various studies were done to explore the effectiveness of different herbicides. They were all field trials. These studies were done by personnel from the US Army Biological Laboratories.	Yes
Fort Meade, MD	1963	cacodylic acid, Dowco 173, butyediol	Various studies were done to explore the effectiveness of different herbicides. They were all field trials. These studies were done by personnel from the US Army Biological Laboratories.	Yes
Kumbha, South India	1945-1946	LN compounds *phenoxy	The main objective of the experiments was to determine the feasibility of accomplishing severe injury or destruction of tropical food crops by the application of growth-inhibiting (LN*) compounds in static trials. Field plantings were treated with variou	Yes

Jacksonville, FL	7/18/1962-7/21/1962	Purple, Fuel Oil, Mix	The HIDAL was used successfully on an H-34 helicopter to spray herbicidal materials. Therefore, it had not been calibrated previously. Spray tests were performed to do so. This was done under order by OSD/ARPA.	Yes
Fort Detrick, MD	8/1961-6/1963	1410 compounds	From 8/1961 to 6/1963, compounds were spray-tested in the greenhouse to evaluate them as effective defoliant, desiccants, and herbicides.	Yes
Gulfport, Miss.	1968-1970	Orange	While discussing the mandatory disposal of Orange, it was mentioned that 15,161 drums were being stored at Gulfport, Mississippi.	Yes
Korea, 2nd and 4th Brigades, 2nd Division area	8/1968	Hyvar XWS, tandex, Urox B, Urox Oil concentrate (liquids) bromacil, tandex, Urox 22 (solids)	In 1968, chemicals were sent from the Plant Sciences Lab, Ft Detrick, MD, to the Republic of Korea for the purpose of testing their effectiveness in the control of vegetation.	Yes
Korea, third Brigade, 2nd Division area	10/3/1968	Hyvar XWS, tandex, Urox B, Urox Oil concentrate (liquids) bromacil, tandex, Urox 22 (solids)	In 1968, chemicals were sent from the Plant Sciences Lab, Ft Detrick, MD, to the Republic of Korea for the purpose of testing their effectiveness in the control of vegetation.	Yes
Hays, KS, Langdon, ND	1960	stem rust of wheat	Two studies on the stem rust of wheat were conducted during 1960 to obtain data on the establishment, development, and destructiveness of artificially induced stem rust epiphytotics.	Und
Eglin AFB, FL, C-52A test area	1962-70	Orange (1962-68), Purple (1962-68), White (1967-70), Blue (1968-70)	CPT John Hunter discussed vegetation changes and ecological studies of the 2 square mile test area which had been sprayed with herbicides over the period 1962-70.	Yes
Beaumont, TX	1950-51	2,4-D	The purpose was to determine means of accomplishing defoliation of tropical forest vegetation by application of a chemical agent. Here, irrigation water studies were done with the agent. Coghill, Hasse, and Yeatner worked here.	Und.
Prosser, WA	1950-51	2,4-D	The purpose was to determine means of accomplishing defoliation of tropical forest vegetation by application of a chemical agent. Here, irrigation water studies were done with the agent. V.F. Burns worked here.	Und.

Near Lake George, FL	Spring 1944	zinc chloride	The purpose was to determine means of accomplishing defoliation of tropical forest vegetation by application of a chemical agent. Spraying here.	Yes
Near Wayside, Miss., Wilcox Road, Greenville, Miss.	9/19/1967	picloram, bromacil, pyriclor, and terbacil, Orange, cacodylic acid	In 1967, the Dow Chemical Company was awarded a DoD research contract. The objective was to prepare as pellets mixtures of various herbicides and to test them on varying vegetation situations for the control of a range of plant species.	Und
Las Mesas Cerros, Mayaguez, PR	5/24/1968, 5/26/1968, 5/27/1968	picloram, bromacil, pyriclor	In 1967, the Dow Chemical Company was awarded a DoD research contract. The objective was to prepare as pellets mixtures of various herbicides and to test them on varying vegetation situations for the control of a range of plant species.	Und
Fulcher Ranch, Greenville, Mississippi	4/15/1968	picloram and bromicil	In 1967, the Dow Chemical Company was awarded a DoD research contract. The objective was to prepare as pellets mixtures of various herbicides and to test them on varying vegetation situations for the control of a range of plant species.	Und
Replacement raining Center of the Royal Thai Army near Pramburi, Thailand	1964 and 1965	Orange, Purple	An extensive series of tests were conducted by Fort Detrick during 1964 and 1965 in collaboration with the Military Research and Development Center of Thailand. The objective was to perform onsite evaluation of phytotoxic chemicals on vegetation in SE As	Yes
Las Mesas and La Jagua experimental areas at Mayaguez, PR	2/1956-6/1956	2,4,5-T, 2,4-D, pentachlorophenol, ammate, weedazol, endothal Harvestaid, Butyne -1,4-diol	During February to June, 9 chemicals were evaluated in PR on 16 genera tropical woody plants. The chemicals were applied in highly concentrated solutions with a microsprayer to the leaves.	Yes
Guanica and Joyuda, PR	6/1956-9/1956	2,4,5-T, potassium cyanate, amiendo, F-2, 6-Ca-4, Y-F Tree and Brush Kiler, ACP M-118, Shed-A-Leaf	9 chemicals were evaluated on 16 genera of tropical woody between June and September. The chemicals were sprayed to duplicate small branches, using a microsprayer.	Yes

Pinal Mountains near Globe, AZ	1965, 1966, 1968, and 1969	2,4-D isooctyl-ester, 2,4,5-t isooctyl-ester, silvex, propyleneglycolbutylether ester, 2,4,5-T butyl ester, 2,4,5-T 2-e-h e	In 1965, the USFS began a land improvement program in the Pinal Mountains. The program called for spraying an area of chaparral with herbicides to accomplish the objectives of multiple land use.	No
Near Rio Grande, on the northeast coast of Puerto Rico	8/23/1967, 10/18/1967, 12/21/1967-12/26/1967	picloram, bromacil, pyriclor, and terbacil	In 1967, the Dow Chemical Company was awarded a DoD research contract. The objective was to prepare as pellets mixtures of various herbicides and to test them on varying vegetation situations for the control of a range of plant species.	Und
Poole's Island, Aberdeen Proving Ground, MD	7/14/1969-	Orange, Orange plus foam, Orange plus foam Orange, Foam	During the week of 7/14/1969, personnel from Naval Applied Science Laboratory in conjunction with personnel from Limited War Laboratory conducted a defoliation test along the shoreline.	Yes
Fort Drum, NY	1959	Orange	The Commanding General, 1st US Army, requested that Ft Detrick assist with defoliation efforts at Ft Drum. Thirteen drums were sprayed there on 4 square miles from a helicopter spray device.	Yes
Loquillo, PR	4/1966, 10/1966	Orange	Field tests of defoliant were designed to evaluate such variables as rates, volume of application, season, and vegetation. Data from aerial application tests at several CONUS and OCONUS locations are provided in tables.	Yes
Hilo, HI	12/1966	Orange	Field tests of defoliant were designed to evaluate such variables as rates, volume of application, season, and vegetation. Data from aerial application tests at several CONUS and OCONUS locations are provided in tables. There were Fort Detrick personee	Yes
Kauai, HI	1967	Orange	Field tests of defoliant were designed to evaluate such variables as rates, volume of application, season, and vegetation. Data from aerial application tests at several CONUS and OCONUS locations are provided in tables.	Yes
Thailand	1964-65	Orange, Blue	Field tests of defoliant were designed to evaluate such variables as rates, volume of application, season, and vegetation. Data from aerial application tests at several CONUS and OCONUS locations are provided in tables.	Yes



See link below for complete information on Korat RTAFB Thanks largely to Larry Westin and others as well

Korat RTAFB Perimeter in relation to Physical Training, Recreation and Living areas

[BATCAT](#)
Veteran Benefit Information



It seems that there were many variations to the container color design and even three flavors of Agent Orange (Orange, Orange2 & Super Orange) doesn't seem to explain the various barrels seen here. I believe this was taken at Johnson Atoll ~ 1976

[johnston atoll chemical agent disposal system](#)

Typical 50/50 mix.
The FSN looks like an
in-progress open slate.
Can't read all of it...
Something like
4308-000-0000.

At least the contents
are labeled!

Looks like 580
pounds of content/drum.

Barrels were reused
increasing the chance for error.

HERBICIDE BUTYL ESTERS
50% 2,4-D and 50% 2,4,5-T

FSN 4308-000-0000
TRANSPORTATION OFFICER
GOLF OUTPOST
MOBILE, ALABAMA

700 AF COMUS MACV
AIRVIN 2046 ORD STORAGE BASE DEPOT
OVSJOM 1/000 061
OVSJOM 4204 7001 XX

12/64 LOT NO. 1007-1
PSA-400-47-C-1204-0000
NET CONTENT 580 LB
GR WT 600 LB CU 10.9

HERBICIDE BUTYL
50% 2,4-D and 50%

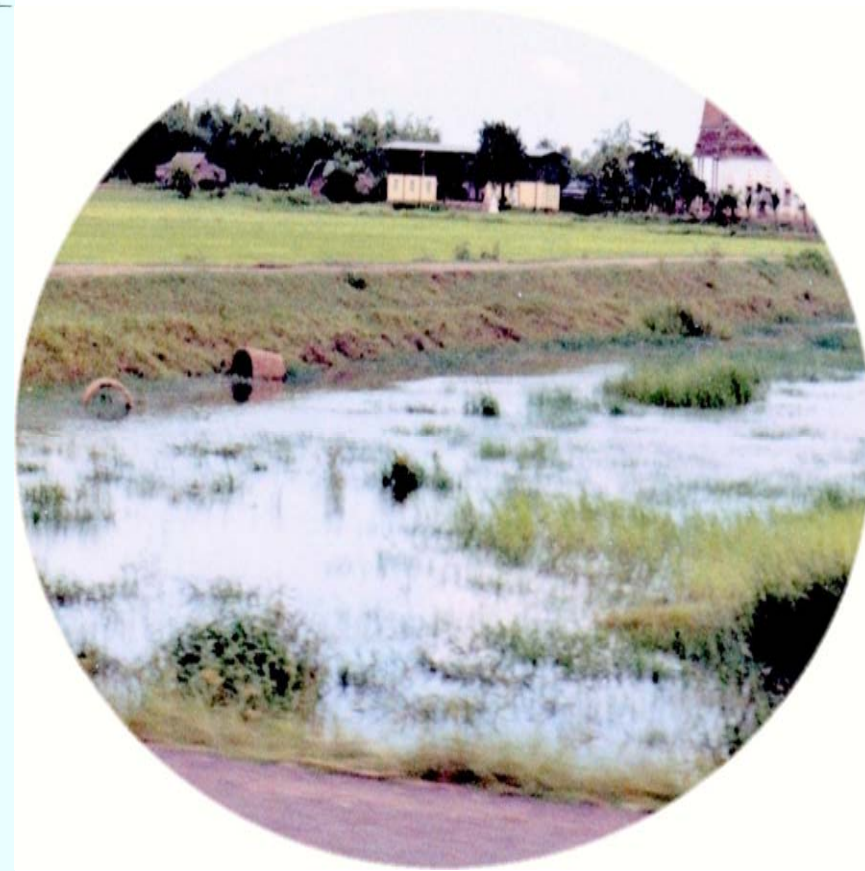
FSN 4308-000-0000
TRANSPORTATION
GOLF OUTPOST
MOBILE, ALA

700 AF COM
AIRVIN 2046 ORD-12
OVSJOM 1/

12/64
PSA-400
NET CO
GR WT

Herbicides in Da Nang Airbase

- Operation Ranch Hand (May 1964 – Jan. 1971) - total transport and handling:
 - Agent Orange: 52,700 barrels (10,961,600 l)
 - Agent White: 29,000 barrels (6,032,000 l)
 - Agent Green: 5,000 barrels (1,040,000 l)
- Operation Pacer Ivy (Dec. 1971 – Mar. 1972)
- Collected and re-drummed 8,220 barrels Agent Orange (1,709,760 l)
- Spills of Herbicides in Da Nang Airbase
- Spills and leakages occurred due to handling (loading, washing and re-drumming)



<https://www.flickr.com/photos/10514937@N05/4578360413/in/photostream/>

XPTitle - Two Drums on left to be identified, possibly Agent Orange Containers.
(4578359321_a29745d8ef_z uploaded May 4 2010)

XPKeywords - 270th Transportation Detachment; Camp Friendship; Vietnam War Era 1969-1971; Wayne Eusanio; U.S. Army Aviation in Thailand 1969-1971; Korat Royal Thai Air Force Base; Photo by Spec.5 Wayne Eusanio; USARSUPTHAI 9th Logistical Command; Nakhon Ratchasima; Agent Orange 1969-1971; Temple; 55 Gal Drum; Rice Paddy; Monsoon



This picture was labeled
'Korat Agent Orange'

Defoliated base parameter
can be seen.



Agent Orange barrels, Korat AFB

Richard Gonzalez

BATCAT

Veteran Benefit Information

[Operation Ranch Hand - Wikipedia](#)

[Operation Pacer IVY - Wikipedia](#)

[Agent Orange & Super Orange](#)



Handling standards either not adhered to or non-existent. Looks like plenty of leaks too.



4 Ways to Prove Agent Orange Thailand Exposure.

I've often said that Vietnam era Veterans that were exposed to Agent Orange in Thailand are the "orphans" of Agent Orange claims. (That includes the survivors of these Veterans who also get royally screwed by the VA.)

Of all the places where the US has conceded that it doused its own soldiers in Agent Orange, these Veterans have it the worst.

Until May 2010, in fact, there was really no reliable path to proving to the VA that you were exposed to Agent Orange while serving at a Royal Thai Air Base in Thailand during the Vietnam War.

What Happened in 2010?

The VA released a Compensation and Pension Service Bulletin that allowed presumptive service connection of diseases associated with herbicide exposure for Veterans that served on certain Thailand bases during the Vietnam War.

Here are the basic "rules" to get the presumption of Agent Orange exposure if you served in Thailand during the Vietnam War:

1) Service at U-Tapao, Ubon, Nakhon Phanom, Udorn, Takhli, Korat, and/or Don Muang, between February 28, 1961, and May 7, 1975.

2) You served as a security policeman, patrol dog handler, security police squadron, or "otherwise served near the air base perimeter".

Seems easy, right? Not so much.

Many Veterans do not fall into the security police or dog handler MOS - and were still exposed to Agent Orange. The VA expects a little more proof from them - though the rule doesn't require it, as a matter of practical reality that's how it works out.

4 Ways to Prove Agent Orange Thailand Exposure.

Understand, before you submit evidence, that you will need to submit competent and credible evidence so that the VA can establish a presumption of Agent Orange exposure on a Thailand Air Base on a "facts found basis".

With that understanding, here are some ways you can submit to prove you were near the perimeter of a Thai Air base - remember, the more the better. I have not yet seen the VA grant presumptions of Agent Orange exposure based a single statement of a single Veteran.

These are not the only ways to skin this cat. Think "outside the box". You don't need to prove you saw, touched, breathed in, drank, or swam in dioxin laden water to prove Agent Orange Thailand Exposure. You need to provide enough evidence to persuade the VA that it was 'at least as likely as not' that your duties put you on the perimeter of a

