

SUFFIELD ALBERTA CHEMICAL EXPOSURE

Veterans that took part in training or testing at Suffield Experimental Station prior to the 1960's and those that took part in training or testing after 1960's at CFB Suffield Ralston Alberta, should be made aware of the following information.

Most of the testing which occurred in the early years at Suffield Experimental Station, during the 1940's - 1960's was done using real chemical warfare agents, and toxic solvents on live troops, who had no idea what they were being exposed to. However, the Department of National Defence, Health Canada, **Canadian Forces Surgeon Generals**, Suffield Staff, and the Canadian Government knew.

Before chemical testing was conducted, Suffield Staff required permission from higher means, the Department of National Defence, **Canadian Forces Surgeon General**, Health Canada, and the Canadian Government. Testing was first under-taken as an excuse to ready for war, this time the Second World War in Europe. Even though studies had been done on warfare agents up to this time (1940's), it was already known what mustard agent could do to the human body. An agreement was put in place not to use mustard agent or any other warfare agents on humans during war or any other time, as a result of the gassings that took place during the First World War. A treaty was put in place and signed in 1925 by Canada.

Those veterans that suffered through the early years of the 1940's, during testing of mustard agents mixed with other chemicals and items, suffered inhumane treatment, without medical aid in many cases. The Department of National Defence, **Canadian Forces Surgeon Generals**, Suffield Staff, Health Canada, and the Canadian Government erred, and are guilty of neglect and suppressing evidence. They failed to record this information into medical documents, and personal files in some cases. This was not a simple error, as it has been repeated throughout the last forty years. These denials allowed the Government to avoid awarding medical pensions in large numbers to veterans who were entitled, and who should have been advised of chemicals they were exposed too.

The treaty was ignored by some countries, including Canada, during the early years of the Second World War and continues to be presently. Nothing was done to stop or discourage the practice of the Suffield Staff, Department of National Defence, **Canadian Forces Surgeon Generals**, Health Canada and the Canadian Government, which was referred to as testing, troop/test, troop/user/trials, or exercises.

This practice continues to this very day. We have witnessed countless accounts of the Government trying to cover their tracks for wrongdoings, which were recently brought out in the open by the Canadian Forces Ombudsman, condemning the government for their inhumane action on soldiers during the 1940's.

The new Ombudsman for National Defence uncovered yet another cover-up by the Government during the Gulf War. Members of the Canadian Armed Forces Engineers came down with unknown ailments, collectively known as "Gulf War syndrome", which the Department of National Defence, **Canadian Forces Surgeon Generals**, and the Canadian Government dismissed as nothing. The Ombudsman once again found evidence to confirm that they had been exposed to chemicals.

Then we have the quagmire of the Canadian Forces Base Gagetown in New Brunswick, in which the Department of National Defence and the Canadian Government kept Agent Orange testing concealed from members of the Armed Forces.

All orders come from the top level, that is, the Government of Canada, and the **Canadian Forces Surgeon Generals**. They are responsible for the safety and health of the members of the Canadian Armed Forces according to their mandate.

However, evidence shows that the Department of National Defence, Suffield Staff, **Canadian Forces Surgeon Generals**, Health Canada and the Canadian Government planned an out for themselves in the years to follow.

- (a) The Plaintiffs' claims alleged in the Statement of claim are barred by the 10 year ultimate limitation period in section 3(b) of the limitations Act, R.S.A. 2000, c. L-12, and the 15- year ultimate limitation period in section 15 of the *limitation Act*, S.O. 2002, c. 24, both of which apply pursuant to section 32 of the *Crown Liability and Proceedings Act*, R.S.C. 1985, c. C-50
- (b) The plaintiffs' claims alleged in the Statement of Claim are barred by the six-month limitation period in section 269 of the *National Defence Act*, R.S.C. 1985,c N-5.
- (c) The plaintiffs' claims alleged in the Statement of Claim are barred by the six-month limitation period in *The Public Authorities Protection Act*, R.S.A. 1942,c. 138 am and *The Public Authorities Protection Act* , R.S.O. 1937, c. 135 as am.
- (d) The plaintiffs' claims alleged in the Statement of Claim are barred pursuant to section 8 of the *Crown Liability and Proceedings Act*, R.S.O. 1985, c. C-50 which provides, *inter alia*, that the Crown is not liable "in respect of anything done or omitted in the exercise of any power or authority exercisable by the Crown...for the purpose of the defence of Canada or of training, or maintaining the efficiency of, the Canadian Forces"

The Government is saying they are not responsible for you or your problems, which may have been contributed to you by factors, which occurred during your Regular Force Service, training, peacetime or in war. You must understand that the Canadian Government only appears to care for its veterans. They respond only when under the spotlight.

Any issues regarding the Armed Forces or veterans take low priority. If new planes are required, you wait while the Prime Minister buys a new one for himself. The military is getting what they need now, because the Government is being watched, with our men and women fighting and dying over-seas. How long was it before the Merchant Navy was recognized? We still have veterans from all wars that should be receiving pensions and medical help, but the Government has nothing but time on its side as they pass the ball to the next group that do not care about the past, let alone the future. Remember this, your present Government is against helping you as shown in the **Government's Notice of Motion in Federal Court, this year 2008.**

There is, at the present time, a **class action before the Federal Court of Canada**, fighting for your rights and your suffering as caused by the Department of National Defence, Suffield Staff, **Canadian Forces Surgeon Generals**, Health Canada, and the Canadian Government. The class action is for all veterans who were exposed to chemicals, including HC smoke (banned by the Montreal Protocol due to its toxic chemicals); toxic simulants and training agents made up by Suffield Staff, which are not listed in Canadian Forces Medical Order's (CFMO'S). The class action is being handled by Merchant Law Group.

Below, is a list of some chemicals used at Suffield Experimental Station, now called Canadian Forces Base Suffield, at Ralston Alberta from 1941 to present date, and at CFB Wainwright during the 1960's. If you were subjected to any of these chemicals, or served at Wainwright or Suffield during your Regular Force Service, and you feel your current conditions might relate to your chemical exposure, you may qualify to join the class action.

CHEMICALS USED AT SUFFIELD DURING TROOP/ TEST/ USER/ TRIAL –
CODE NAMED VACUUM - 1968 1st Battalion Queens Own Rifles

Those that attended were exposed to the following chemicals, (total of 60,000 plus lbs.)

1. Mustard Agent – Liquid- TA66/1 (Y) 13% **(Poison) ** Very Toxic**
2. Diethyl Phthalate – Solvent – **Risk uncertain**
3. Tri-2-ethylhexyl Phosphate - **Toxic Solvent**
4. Tri-2-ethylhexyl Phosphate **mixed** with 0.16% O-chlorobenzalmalononitrile - **Toxic Solvent**
5. CS2 Powder- O-chlorobenzalmalononitrile - with anti-wetting agent?
6. CS1 Powder- O- chlorobenzalmalononitrile - with-5% Silica Cabosil- **Health Risk, Respiratory**
7. CS Vapour- O-chlorobenzalmalononitrile - will be produced by means of venture generator attached to exhaust manifold of vehicle. **(Heating chemicals) (Heating CS Gas creates cyanide poison) (Carbon Monoxide) Very Toxic**
8. Tributyl Phosphate**- (TBP) **mixed** with 10% O-chlorobenzalmalononitrile (Liquid & Vapour) - **Toxic Solvent**
9. 7% O-chlorobenzalmalononitrile (CS)-**mixed** with Methylene Chloride (Vapour) **** Toxic Solvent**
10. Butyl Mercaptan-**mixed** with Methylene Chloride** (Vapour) **Very Toxic Solvent**
11. Amyl Acetate-**mixed** with Methylene Chloride** (Vapour) **Very Toxic Solvent**
12. Benzyl Salicylate – Solvent **the toxicological properties of this material have not been fully investigated.**
13. Diethylene Glycol **(Poison) - Very Toxic Solvent**
14. Hexachloroethane (HC) Smoke People/Health A-3-6 **** Very Toxic**

**** Probable cancer causing**

Not all chemicals listed are shown in Canadian Forces Medical Orders as training agents, except for O-chlorobenzalmalononitrile (CS gas).

HC Smoke** is banned by the Montreal Protocol due to its toxic chemicals.

HC Smoke** is still being used by the Canadian Armed Forces, under orders to wear gas mask while being exposed.

Most of these chemicals are ignored by Veterans Affairs when handling your claims, they are aware of them but will not bring the matter forward on your behalf. Members of the Boards refuse to address either their toxicity, or their use. In most cases, these members have no qualifications to deal with or understand their health hazards.

There is no known test on humans, being exposed to all of these chemicals over such a short period, nor their long-term or short-term effects on humans, nor of exposure to mixing-chemicals, and heating chemicals, as in this case.

TOXICITY OF OTHER CHEMICALS USED AT SUFFIELD, WAINWRIGHT, AND SARCEE TRAINING AREA

Phosgene - **Highly toxic. Severe poison, Inhalation may be fatal.** Odour dose will not give sufficient warning of lethal concentrations. Symptoms may be delayed up to 24 hours. Concentrations below 1ppm may be harmful. Severe eye and skin irritant. Corrosive – may cause burns. Decomposes to further toxic compounds in the presence of water. A chlorinated compound. (Suffield)

Bayol Oil – Irritant, **risk of serious damage to eyes.** Prevent contact with skin. Do not breath vapour. Material may be irritating to mucous membrane and upper respiratory track. Aspiration into lungs will cause lipid pneumonia. (Wainwright)

TOF – (tri-2- ethylhexyl Phosphate) – **Spray hazard, may act as an irritant or be harmful.** Skin redness, pain. Eyes redness, pain. Chemical dangers; the substance decomposes on heating, producing toxic fumes of phosphine and phosphorous oxides. Reacts with oxidants. (Wainwright, Suffield, Sarcee)

Amyl Acetate – **Vapour hazard, harmful,** flammable liquid (LDLO= 1500/kg, TLV=525mg/m³). The solution irritates the skin, eyes, and the mucous membranes. Inhalation of the vapour can cause headaches, tiredness and irritation of the lung. Long-term exposure causes coughing, chest pain, vertigo, nausea, and eczema. Irritates the conjunctiva, the nose and the throat. Can cause narcosis. (Suffield)

Benzyl Salicylate – **Hyperpigmentation** of the face or exposed skin. (Suffield)

CS 1 Powder – Aerosol, to produce irritation of the eyes and respiratory system. Containing silica (Cabosil). **(Wikipedia, the free encyclopedia: “Although described as a non- lethal weapon for crowd control, many studies have raised doubts about this classification. As well as creating severe pulmonary damage; CS can also significantly damage the heart and liver.” “When CS is metabolized, cyanide can be detected in human tissue. (36) According to the United States Army Centre for Health Promotions and Preventive Medicine, CS emits “very toxic fumes” when heated to decomposition, and at specified concentrations CS gas is an immediate danger to life and health. They also state that those exposed to CS gas should seek medical attention immediately.) Note: the heating of CS gas took place during troop/user test code named Vacuum in 1968.** (Suffield, Wainwright, Sarcee)

CS 2 Powder – It is **CS 1 which has been treated with an anti-wetting agent**, which makes the material extremely persistent. Painful, burning eyes, lachrymation, conjunctivitis, erythematous eyelids, blepharospasms; irritated throat, cough, chest constriction, headaches, erythematous vesiculation of the skin. (Suffield, Wainwright, Sarcee)

Fluorescent Dye – Kiton Yellow FF – N/A (Suffield)

TBP – Tributyl Phosphate** – Ground **hazard, more volatile than (TOF)**. Irritant, or may be harmful. Skin redness, pain. Eyes redness, pain. On heating produces toxic fumes. (Suffield, Wainwright, Sarcee)

TA66/1 (Y) - 13% HT (60 parts 4 (2, 2' dichlorodiethyl sulphide), 40 parts T724 (2, 2' di (8 chloroethylthio) diethylether)) **mixed** in DEP (diethyl phthalate) = **TA66/1 (y) = LIQUID MUSTARD GAS****. This vesicant (blister gas) – Skin systemic poisoning may result from inhalation, dermal exposure and ingestion. Some CW agents can penetrate the skin. This mainly concerns liquids but in some cases also gases and aerosols. Solid substances penetrate the skin slowly unless they happen to be mixed with a suitable solvent. Local damage to the skin may promote absorption. Inhalation; Chemical agents may be inhaled, or ingested (e.g.) through contaminated food or water). The respiratory system is affected by inhalation. The eyes are particularly sensitive to chemical agents and may cause the development of symptoms very quickly. Psychological stress may itself mimic some of the effects of chemical weapons. Very toxic and corrosive. Extremely hazardous material. Known human carcinogen. May be fatal if inhaled, swallowed or absorbed through the skin. May cause serious eye and lung damage. **USE: CHEMICAL WARFARE POISON!**

- **Used in Project Adobe 1966 2nd Battalion Queens Own Rifles**
- **Used in Troop/test User/Trial Code - Named Vacuum 1968 1st Battalion Queens Own Rifles (Suffield)**

Chloracetophenone – CN - Gas** – It is of higher toxicity than CS gas, which is (O-chlorobenzylidene Malononitril). Burning sensation, lachrymation, inflammation and oedema of the eyelids. Blepharospasm, photophobia, temporary blindness. Visual impairment and pulmonary oedema. Drops or splashes on the skin can cause papulovesicular dermatitis and superficial skin burns. **Used in CAF before CS.** (Suffield, Wainwright, Sarcee)

Hexachloroethane** – Smoke, high concentrations of smoke generated are **extremely dangerous**. High concentrations of zinc chloride smoke generated under this condition have caused fatalities. **(Found in HC Smoke) & (Smoke Grenades)** (Suffield, Wainwright, Sarcee)

Zinc Chloride** – The toxicity of zinc chloride is mainly due to the formation of the strongly acidic HCl, but is also to a lesser extent due to thermal lesions. The acidic HCl vapour causes lesions of the mucous membranes of the upper airways. The damage and clinical symptoms following zinc chloride exposure therefore appear immediately after the start of the exposure. However, damage to the lower airways also occurs and may result in delayed effects. These have been attributed to the presence of fine zinc chloride particles and phosgene. Acute effects, highly irritating and may be very dangerous when inhaled. Symptoms include dyspnoea, retrosternal pain, hoarseness, stridor, laryngism, cough, expectoration and occasionally haemoptysis. Cyanosis and bronchopneumonia may develop. It is caustic to mucous membranes and can cause sub acute interstitial fibrosis. **By-products gases indicate the presence of suspected carcinogens. (Found in HC Smoke) & (Smoke Grenades)** (Suffield, Wainwright, Sarcee)

Cadmium** – **Probably carcinogenic.** Cadmium has moderate acute toxicity, producing gastrointestinal or pulmonary irritation effects from ingestion or inhalation, respectively. Sub chronic and chronic exposure to cadmium have been associated with renal, cardiovascular, endocrine, hepatic, bone, hematological, and immunological effects. Respiratory conditions include bronchiolitis and emphysema. (Suffield)

Lead** – **Toxic if inhaled. (Found in HC Smoke)** Lead Poisoning (also known as saturnism, plumbism, or painter's colic) is a medical condition caused by increase levels of the metal lead in the blood. Lead may cause irreversible neurological damage as well as renal disease, cardiovascular effects, and reproductive toxicity. (Suffield, Wainwright, Sarcee)

Arsenic** – **Evidence of carcinogenicity. (Found in HC Smoke)** Arsenic exposure in the workplace occurs through inhalation, ingestion, dermal or eye contact. Chronic exposure to arsenic can lead to dermatitis, mild pigmentation keratosis of the skin, vasospasticity, gross pigmentation with hyperkeratinization of exposed areas, wart formation, decreased nerve conduction velocity, and lung cancer. Acute exposure can cause lung distress and death. (Suffield, Wainwright, Sarcee)

Mercury** – **Very Toxic** Historically, short-term exposure to high concentrations of mercury vapour caused harmful effects on the nervous, digestive and respiratory systems, and the kidneys. In most cases, exposure occurred when mercury was heated. Initial exposure to high concentrations of mercury vapour produce symptoms similar to “metal fume fever” including fatigue, fever, and chills. Respiratory system effects include cough, shortness of breath, tightness, and burning pains in the chest and inflammation of the lungs. Occupational exposure to 1 to 44 mg/m³ of mercury vapour for 4 to 8 hours caused chest pain, cough, coughing up blood, impaired lung function, and inflammation of the lungs (pulmonary edema) has occurred. Exposure to high, but unspecified, concentrations of mercury vapour has caused death due to respiratory failure. All of the reported deaths resulted from inhaling mercury vapours formed upon heating mercury.

Carbon Monoxide – **Poison Recognized** development toxicant suspected cardiovascular or blood toxicant, neurotoxicant, reproductive toxicant, and respiratory toxicant. (Suffield, Wainwright, Sarcee)

Tabun (GA) ** – **Very Toxic Nerve Agent**, is a man made chemical warfare classified as a nerve agent. Nerve agents are the most toxic and rapidly acting of the known chemical warfare agents.

- **Used in 1968 Suffield, just prior to Troop/test user/trial Vacuum.**

Sarin (GB) ** – **Very Toxic Nerve Agent** Sarin, also known by its NATO designation of GB, is an extremely toxic substance whose sole application is a nerve agent. As a chemical weapon, it is classified as a weapon of mass destruction by the United Nations in UN Resolution 687. It is estimated that sarin is more than 500 times more toxic than cyanide.

- **Used in Suffield during 1968, Rapid Tan just prior to troop/test user/trial Vacuum**

Soman (GD) ** – **Very Toxic Nerve Agent** Soman is a human-made chemical warfare agent. Nerve agents are the most toxic and rapidly acting of the known chemical warfare agents. They are similar to pesticides (insect killers) called organophosphates in terms of how they work and the kinds of harmful effects they cause. However, nerve agents are much more potent than organophosphates pesticides. Soman is known also as “GD”

- **Used in Suffield in 1968, just prior to troop/test user/trial Vacuum**

VX – Very Toxic Nerve Agent** VX S- 2 [diisopropylamino] O-ethyl methylphosphonothioate is an extremely toxic substance whose sole application is as a nerve agent. As a chemical weapon, it is classified as a weapon of mass destruction by the United Nations in UN Resolution 687. The VX nerve agent is the most well known of the V-series of nerve agents and is considered an area denial weapon due to its physical properties.

- **Used in Suffield in 1968, just prior to troop/test user/trial Vacuum**

Serratia Marcescens – Can be Fatal Source Public Health Canada, MSDS-Infectious Substance. Serratia Marcescens Pathogenicity: Opportunistic infection of the endocardium, eyes, blood, wounds, urinary and respiratory tracts; infections are often severe or fatal; Notorious nosocomial pathogens, particularly S. Marcescens which is responsible for 4% of hospital acquired pneumonias.

- **Used as a simulant organism (Suffield)**

Caramiphen PAM Chloride Injection – Anticonvulsants for organophosphorus
Used on volunteers (Queen Own Rifles) (Suffield)

Cyanogen Chloride (C.K.) – Poison Inhalation hazard**
Used in June 1945 w/M-78 Bomb (three trials) (Suffield)

HTV (Allopene) ** – Thicken Mustard Gas Vesicant and Blister Agent very Toxic.
Used February 1943 (Suffield)

Hydrogen Cyanide (HCN) ** – Very Toxic- Used as Chemical Warfare Agent.
Used March 1943 Suffield

Choking Agent (CG) – Very Toxic- Used as Chemical Warfare Agent**
Cyanogen Chloride (CK) ** – Very Toxic- Used as Chemical Warfare Agent
Both were used in May 1943 Suffield

Levenstein (HS) ** Filled with Asbestos – Very Toxic
Used 23 May 1943 Suffield

Mustard Agent Y4-(HTV) with 0.1% Perspex (British for Plexiglas) – Very Toxic –**
Used 24 June 1943 Suffield

Chemical Shell Charged HBV (Hepatitis B Virus) – Toxic
Used July 1943 Suffield

DDT, Diol 55, and Carbon Tetrachloride – Very Toxic**
Used to control Spruce Budworm by means of aircraft spray.
Used 25 August 1944 Suffield

Compound 1080** – **Very Toxic** - used to kill Richardson ground Squirrels.
Used 30 June – 30 September 1946 Suffield

Benzene Hexachloride** – **Very Toxic** – used as a pesticide
Used 01 – 31 December 1946 Suffield

DEP, DBP, TBP, and Bayol – **Toxic Solvents** –
12,000 lbs used at CFB (Wainwright) 17 February 1960 Field Experiment 525

These are a select few cases in which Very Toxic Chemicals were deployed within the boundaries of Suffield Experimental Testing Station, now called (CFB) Canadian Forces Base Suffield. The training area is 2600 km square, and is located at Ralston Alberta. Some toxic solvents were used at CFB Wainwright, and Sarcee training area in Calgary.

A full scope of the testing that took place within these areas will never be known. The attempt to gather information from both Suffield and the Canadian Government has been a very daunting task for those members who were there and suffer from the effects of chemical exposure.

Our research has shown that the more we look, the more we find. There are hundreds of tests, the records of which are still being withheld by our government. We strive to find only the facts of which chemicals were used. All of our information is taken from records.

We are former members of the Canadian Armed Forces. We, and some of our members, attended Suffield during our Regular Force Service. Some members suffer from exposure to both the chemicals and chemical smoke that was used during service periods. The above is a short list of chemicals used by the Department of National Defence, Suffield Staff, Canadian Forces Surgeon Generals, and acknowledged by Health Canada, and the Canadian Government.

A large number of veterans applied to Veterans Affairs for their exposures to chemical warfare agents, toxic solvents, and HC smoke exposure. Most have been denied by the department of Veterans Affairs who simply say, where is your evidence? This is a tough hurdle for veterans as there was no evidence entered into their files.

Why did the officials not enter this information into a veteran's medical or personal files?
Why were we not informed as to the dangerous chemicals, found within HC Smoke?

In the 1970's, a report was sent to the Canadian Department of National Defence from the United States Department of Defence regarding dangerous toxic chemicals with the use of HC Smoke. We were not advised of this information, nor were we told to dawn (wear) respirators during exposure, as they are required to do today.

Veterans Affairs Canada have a complete research department, yet it seems they cannot find the information that we do. They make contact with CFB Suffield, who provides information, which is incomplete, or a washed down version, of what really happened.

Veterans and their reports, official medical documents revealed that some veterans suffered damaging injuries to the lungs and upper respiratory systems from inhalation, of agents or chemicals used or other related chemical injuries. In some cases, we have members who worked very close and in confined spaces with HC smoke. Suffield stated that CS gas was the main training chemical used during troop/test/user/trial, code-named Vacuum in 1968, without mentioning other chemicals that were mixed with CS. Thus giving a more toxic chemical exposure to troops on the ground.

We all know that it was used, as well as mixed with other chemicals. Suffield staff are not being transparent about all of the other chemicals used or mixed with **2-chlorobenzalmalononitrile, aka (CS)**. There is no such thing as CS, this is a misnomer; it is the first letter of the surnames of the two inventers.

These are not by any means all of the chemicals used at Suffield. If you have any questions relating to other chemicals that you think you may have been exposed to, ask our web site for an answer. We will post any chemical that is known by government documents as being used at Suffield.

Use this list to help your own research, records, and information for Veterans Affairs claims. Make contact with Merchant Law Group if you were there and you are fighting a pension claim that is being denied. We are thousands of veterans who are being denied disability pension, medical help, final compensation, and closure. Your age is not a factor in this class action. We wish each one of you good luck, and hope this sheds some light on your own plight. We shall remember them.

Veterans