



Appeal: 84/11 Pes

J U D G E M E N T

PERMIT NO: 112-7-84/86, issued to the Tahsis Company Ltd. for the use of 2,4-D Amine 80, 2,4-D Ester 80, and Krenite in the Gold River, Zeballos and Tahsis areas for control of deciduous brush on 964 kilometers of road-side, by hose and nozzle broadcast spraying. Total area - 964 hectares.

APPEAL: The bases of the appeals were as follows:

Village of Zeballos

1. Insufficient information as to location and area. The permit lists the general area but no definite site, eg. Zeballos - where exactly in town? just outside of municipal boundaries?
2. The usage of the pesticide 2,4-D. This is one pesticide that should be banned entirely from being used.
3. There is no indication as to which pesticide is being used where.
4. What happens if 2,4-D is used in the roadside hose and nozzle method? Six days or six months later when it rains, then all this 2,4-D is being washed down the ditches and heads for the creeks and rivers.
5. Who is held responsible for the damage that can occur where such pesticides are used? It is relatively hard to replace fish or wildlife.

Village of Gold River

1. The use of the different pesticides with their active ingredients as listed within the permit, and the close proximity of its use to roadways.
2. There is also heavy public use of these roadway rights-of-way for picking wild strawberries and blackberries. Domestic animals sometimes accompany the public during these times. Wildlife will certainly be affected.

HEARING INFORMATION:

The hearing was held on July 19th, 1984, at 9:00 a.m. at the Gold River Chalet, Gold River, B. C.

The Board members in attendance were:

Mr. Frank Hillier, P. Eng. -	Chairman
Mr. Ian Hayward, P. Eng. -	Member
Dr. Ralph Patterson, Ph.D. -	Member

Miss Shirley Mitchell - Official Recorder.

The REGISTERED APPELLANTS:

- 1) Village of Zeballos - represented by:

The Village of Zeballos did not show up for the hearing, nor did it bother to notify the Board that its representatives would not be in attendance. The Village of Zeballos, therefore, abandoned its appeal.

- 2) Village of Gold River - represented by:

Mr. Keith Hutchinson - Alderman  
Mrs. Sheila Johnston - Alderwoman

Mrs. Johnston did not give any testimony.

THE RESPONDENT;

The Tahsis Company - represented by:

Mr. Richard Kosick - Chief Logging Engineer and  
Asst. Chief Forester

Mr. Brian McCutcheon - Area Forester, Southern  
Region

Mr. Frank Senko - Area Forester, Northern Region

Mr. Gordon Kayahara - Forester for Zeballos and  
adjacent camps

Mr. Senko and Mr. Kayahara did not give any  
testimony.

LIST OF EXHIBITS:

"A" - Presentation of the Village of Gold River

"B" - Presentation of the Company

SUMMARY OF THE APPELLANT'S PRESENTATION (Gold River)

The main points of Mr. Keith Hutchinson's testimony were  
as follows:

1) The Village seems to be opposed to the application  
of the pesticides in question mainly on the basis of  
statements made in the past by Professor T.D. Sterling, Ph.D.,  
of Simon Fraser University. Two of Dr. Sterling's state-  
ments which were presented to the Board were as follows:

- a) The use of many chemicals in forest culture has been  
proven detrimental to the health and safety of workers  
and of individuals who inhabit these areas as well as  
to the wildlife in it. The time may have come to  
examine the advantages of discontinuing the use of  
weed and tree control by the use of herbicides and  
pesticides in forestry.
- b) The forest industry suffers from heavy unemployment.  
Manual removal of undesirable trees and foliage would  
provide considerable employment throughout the Province.



Claims that the method (of forestry management without herbicides) is much more costly than with the use of herbicides needs more adequate documentation. Estimates given within the industry have been unconvincing, especially as they do not take into consideration (1) costs of insuring the safety of the area being sprayed (assuming the effectiveness of the spraying as is claimed), (2) damage caused by spraying to conifers (herbicides and pesticides affect all life forms, including those conifers which are desired), and (3) costs of unemployment to workers in the industry and to taxpayers.

2) The basic requirement of B.C. Government Ministries, Section 3, reads "All pesticides must be applied in the manner that will not endanger the applicator or persons living in or near, or persons passing through the treated area, and will not endanger the environment." We maintain that this policy is in conflict with what is known of health effects of all herbicides and pesticides preparations presently used in forests.

3) It is also required by the B.C. Government Ministries that a ten-meter pesticide-free zone be maintained along all water bodies and in wetland areas. B. C. has heavy rainfalls and it would seem to be difficult to keep any chemicals out of the watersheds and wetlands.

It is felt that the hose and nozzle method of application does not provide enough control to abide within the parameters of the above-stated policy. Since the chemicals being used do not change their form after application, they remain in the area as residuals and are washed into the watershed system during the next heavy rainfall.

4) The Village offered as proof that pesticides are dangerous, the following information:

The suffering of some 50,000 veterans of the Viet Nam conflict who are afflicted with nervous disorders, cancer, and other illnesses caused by exposure to "Agent Orange", a mixture of the chemical herbicides that are included in the permit in question. The fact that seven chemical companies involved in the manufacture of this product have decided in favour of an out-of-court settlement of \$180,000,000, would appear to be an admission on their part that these chemicals do have an injurious effect on humans. These men are the guinea pigs that have been lacking up until this time, and

although it is admitted that the product may have been less carefully handled under these conditions than it might have been and, indeed, the product itself more toxic than available for peactime use, the fact that the chemical is injurious to humans cannot be denied.

5. The B.C. Government is one of the few in the developed countries of the world that still allows the use of chlorophenols such as 2,4-D as herbicides in the forest industry.

6) We further contend that the permittee has not complied with the requirements as outlined in Item 2 of the Public Information Section of the Pesticide Control Act, since the maps were not posted in the public viewing area as required during the week of July 9 - 13, 1984.

COMMENTS MADE DURING CROSS-EXAMINATION OF THE APPELLANT:

1) The Appellant had no specific area of concern as far as geography was concerned.

2. Mr. Kosick said that in 26 years, he had never seen a strawberry plant on the roadside in the area and, therefore, believed they did not exist. Mr. Hutchinson never contradicted him.

3) Mr. Hutchinson admitted that 2,4-D was not Agent Orange.

4) Mr. Kosick stated that the citizens of Gold River used large quantities of 2,4-D in the form of "Weed-be-Gone" and "Weed-and-Feed" on their gardens and lawns, Mr. Hutchinson said that he was not aware of this and did not condone the use of it at any time. He, however, noted that no action had been taken by the Village to prevent its use within the area controlled by the Village.

5) Mr. Kosick stated that the Village itself used 2,4-D on public lands and wondered why the Village assumed this right but would not extend the same right to the Tahsis Company. Mr. Hutchinson said that he was not aware the Village used 2,4-D on its own lands.

6) Mr. Kosick wondered why there seemed to be a "double standard" in this regard, and asked also why it was that the Tahsis Company had been singled out for special treatment by the Village. He noted that other Companies in the area and the Ministry of Forests were proceeding with herbicide applications, but the Village was not appealing their permits. Mr. Hutchinson said he was not aware of these facts.

7) Mr. Kosick asked Mr. Hutchinson if he was aware that because of the delay caused by the appeal, the concentration of 2,4-D necessary for the weed kill would have to be raised from 24 oz. to 48 oz. or even 60 oz. per 100 gals. Mr. Hutchinson was aware of this fact and said that the Company should, therefore, wait until next year.

8) Mr. Kosick asked Mr. Hutchinson if he was aware that 97 percent of the 2,4-D used in this country was used for agricultural purposes, 2.5 percent was used for domestic purposes, and 0.7 percent was used in the forests. Mr. Hutchinson said that he was aware of this fact.

9) Mr. Hutchinson said that the maps of the area to be sprayed had not been properly posted. When questioned, he stated that he had not investigated this matter personally. He had delegated the task to another person, whom he believed to be reliable.

10) Mr. Hutchinson indicated that he had relied principally on the information provided by Dr. T.D. Sterling, the information in the book "The Other Face of 2,4-D", and the I.B.T. fraudulent tests in regards to the health aspects of 2,4-D. He also indicated that he had not read the many other reports on 2,4-D produced by other sources, including University researchers.

#### SUMMARY OF THE PERMIT HOLDER'S PRESENTATION:

The main points of Mr. Kosick's and Mr. McCutcheon's testimony were as follows:

1) The herbicides to be used are fully registered for forestry use in Canada. They have been and are currently being used by all forest companies and the Ministry of Forests within the Nootka Timber Supply Area.



- 2) The rates of chemical to be used are moderate. The amounts of chemical to be used are infinitesimal compared to similar products used in Canadian agriculture today.
- 3) When used properly, there will be no environmental damage and no hazard to operators, the public and wildlife from this herbicide spray program.
- 4) Roadside weed control is vitally important to maintain visibility, access, productive coniferous plantations and to eliminate alder seed sources.
- 5) Alternate methods of treatment are costly, ineffective or more hazardous to workers.
- 6) The use of other registered pesticides are being investigated, few alternatives exist.
- 7) Few edible berries exist along the roadsides in question.
- 8) Only 200 km. of roadside will be sprayed this year, thereby reducing the impact of the program. Also, the width sprayed will be generally less than indicated in the permit.
- 9) The 10-meter pesticide free zone along all waterbodies and the use of Krenite near fish bearing streams will reduce the risk of any chemical reaching any fish bearing stream.
- 10) Tahsis Company has 5 competent, certified pesticide applicators to supervise the program. The Contractor has a 4-man team, all certified pesticide applicators.
- 11) The Tahsis Company has applied to use a combination of the best two herbicides available at the time of their permit application, dated October 2nd, 1983.
- 12) The Appellant's concerns are unfounded in light of the vast amount of knowledge available about the herbicides in question.
- 13) In addressing the Appellant's concerns, Mr. McCutcheon noted the following:
  - a) The Village of Gold River uses 2,4-D on the public playing fields within the Village. The

Village's own crews apply the pesticide.

- b) The 2,4-D used in the Village is in the form of Weed and Feed, and is in the same concentration as the Company's roadside spray (1%).
- c) 2,4-D, a number of commercial herbicides, and more dangerous insecticides, are sold within the Village and used in and around the home and garden with no government restrictions. The possibility of small children and domestic animals coming in contact with these pesticides is far greater than the hazard from any roadside spray program.
- d) There are no edible strawberries along roadsides, to the Company's knowledge. Blackberries and thimbleberries grow along open roadsides and in open slash, but not in areas invaded by alder. Since open areas will not be sprayed, there is absolutely no danger to berrypickers. It is unlikely, however, that berrypickers will gather berries even in these open roadside areas as they are usually smothered in dust from the traffic on the gravel roads. All roads that are sprayed will be posted for public information.
- e) The Appellants have stated that domestic animals and wildlife will be poisoned by the herbicides. The Company, however, notes that 2,4-D is of low toxicity to humans and animals, mammals in particular. For example, a deer would have to swallow 3 liters of spray mixture to be seriously affected. That would mean it would have to drink all the spray over an area 100 meters long by 1 meter wide. Similarly, a dog would need to drink all the spray mix on a surface area 10 meters by 1 meter, to be affected.
- f) The Appellants fear that fish stocks in adjacent rivers would be lost. The Company notes that 2,4-D has a sublethal toxicity to fish. That is why the permit regulations require a 10-meter pesticide free zone on all waterbodies to ensure that not even a drop of 1% spray mix enters any stream. By using Krenite near sensitive fish streams, the Company will be further reducing the chance of environmental damage. Several scientific tests carried out on Vancouver Island downstream from spray areas have not detected any 2,4-D above .1 part per billion, the lowest level of detection that can be measured.



- g) The appellants feel that bees will be endangered. The Company notes that 2,4-D has been found not to be hazardous to bees. Nevertheless, the Company will not spray any herbicide within 100 meters of any commercial or private beehive.

COMMENTS MADE DURING CROSS-EXAMINATION OF THE PERMIT HOLDER

1) Mr. McCutcheon said that as far as he was concerned, there was no doubt whatsoever that 2,4-D posed any threat to health of the general population in the spray area, the applicators or the environment.

2) In respect of the tests spoken of in Section 13(f) of the Company's testimony, these tests were taken over an extended period of time in the Port Alice area. In plain language, no 2,4-D was detected in the streams and creeks downstream from the spray area after the application of this herbicide.

3) The roads involved in the Tahsis spray program are principally all on public lands on which the Tahsis Company has forest cutting rights.

4) The Company personnel stated that during the spraying program, if the wind rose to 5 kilometers per hour, they would increase the drop size of the spray, and if the wind rose to 8 kilometers per hour, the Company would stop spraying.

DECISION:

On July 19th, 1984, a decision dismissing the appeal was brought down by the Board. This decision was published without the usual time-consuming write-up of the case in the hope that by taking this prompt action, the Company would be able to reduce the concentration of the spray material used and still obtain proper results.

After further deliberations, the Board now confirms the original decision, which is that this particular herbicide application will have no unreasonable adverse effect on the health and well-being of mankind and/or the environment.

Comments of the Board in connection with the case are as follows:

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- 1) The Board admonishes the elected representatives of the Village of Zeballos for not appearing at the hearing and for not letting the Board know that they did not intend to appear. The Environmental Appeal Board hearings cost from \$3,000 to \$7,000 per hearing. If appellants do not turn up at a hearing, an expenditure of the magnitude indicated above may be made by the Province for no reasonable purpose. Appellants, particularly elected representatives of the people of this Province, therefore, have a moral obligation to see that this does not happen, particularly at this time of economic hardship.
- 2) The Board was disappointed to learn that the representative of the Village of Gold River had not read the Federal Government's evaluation on 2,4-D and Krenite. The Federal Government's public employees who did these studies, or had them done, are in fact the employees of the citizens of Canada, including the Village of Gold River, and it is a sad commentary when their findings are not only ignored, but are held in such contempt that they are not even read.
- 3) Neither Dr. T.D. Sterling nor the author of "The Other Face of 2,4-D", has ever appeared before the Environmental Appeal Board. Their information on herbicides has always been presented by others. The Board finds this disappointing, for no cross-examination of their evidence is possible. This means that the evidence is hearsay and must be thrown out.

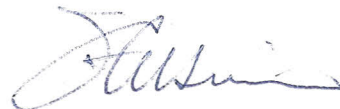
Further, in respect to the tests done on 2,4-D by I.B.T., this is an American organization and has no bearing on the continued Canadian acceptance of this herbicide. The Board is, therefore, at a loss to understand the position taken by the Village of Gold River on this matter.

- 4) The Board understands that Agent Orange is a mixture of 2,4-D, 2,4,5,T and four dioxins, 2,3,7,8 TCDD. The Board also understands that Agent Orange was developed as a weapon and has very little relationship to the 2,4-D used in the Province of British Columbia. To compare 2,4-D with Agent Orange is like comparing salt with a mixture of salt and cyanide. If the combination of salt and cyanide is poisonous, then salt by itself must also be poisonous. This type of argument is absolutely ridiculous and will not be accepted by the Board.

- 5) The Board does not understand what the term - "B.C. Government Ministries, Section 3" refers to. It does know, however, that the terms of this permit are entirely compatible with the provision that "all pesticides must be applied in a

manner that will not endanger the applicator or persons living in or near, or persons passing through, the treated area, or will not endanger the environment".

6) The B.C. Government, along with the other nine governments of the provinces of Canada, comply with the provisions of the Federal Government's legislation in regards to pesticides. The Appellant has stated that the B.C. Government is one of the few of the developed countries of the world which still allow the use of chlorophenols, such as 2,4-D, as herbicides in the forest industry. This statement was completely unsupported, and is contrary to all other information the Board has at its disposal. The Board understands that the only country, of all the developed countries where 2,4-D is supposedly banned for use in the forests, is in Sweden, but the Board has never been given proof of this fact.



F. A. Hillier, P. Eng.,  
Chairman  
Environmental Appeal Board

August 17th 1984  
Victoria, B. C.