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IN THE SUPREME COURT)
)
OF THE TERRITORY OF)
)
PAPUA AND NEW GUINEA)

No. W.S. 11A of 1961 (N.G.)

BETWEEN:

NEW BRITAIN PLANTATIONS LIMITED

Plaintiff

- and -

W.A. FLICK & CO. (NEW GUINEA) PTY.
LIMITED, P.L. JAMES & CO. LIMITED
AND DAVID B. TUDEHOPE

Defendants.

J U D G M E N T

RABAUL

SMITHERS J.

New Britain Plantations Limited sues W.A. Flick & Co.

13/7/62

(New Guinea) Limited, P.L. James & Co. Limited and David B. Tudehope.

As against the first Defendant it says that in March 1957 it agreed for good consideration to treat the Manager's residence, Overseer's cottage and other buildings on a Plantation known as "Londip" for the extermination therefrom of white ant and borer.

It alleges that the agreement contained terms under which the first Defendant undertook to use the latest techniques and scientific materials and to avoid undue interference with the normal activities carried on in the buildings and that the method of treatment and materials used would be specially selected to suit the particular pest problem involved.

By an amendment to the Statement of Claim it further alleges that the first Defendant undertook to perform the work with due care and skill and in a manner which would not cause the premises to be dangerous to the occupants of the houses.

It says that the first Defendant carried out the work by an agent namely the second Defendant and that the work was done in such a way that there was a breach of the terms of the contract or that there

was a breach of the first Defendant's duty to the Plaintiff arising in tort in that the work was performed negligently and that the first Defendant would be liable to it in tort even although the second Defendant was an independent contractor of the first Defendant.

As against the second Defendant the Plaintiff says that it performed the work and employed the third Defendant to carry out the actual operations of mixing and applying the liquid with which the premises were treated and that the work was performed negligently.

As against the third Defendant it says that the negligent acts were performed by him personally.

The alleged damage was:-

- (a) rendering the Manager's house uninhabitable by introducing into it some substance which made it permanently dangerous to the health of the occupants;
- (b) rendering cupboards and fittings and their contents dangerous to persons coming into contact therewith or proximity thereto;
- (c) rendering furniture dangerous to use;
- (d) causing the Plaintiff's Manager to become ill and thereby subjecting the Plaintiff to liability in respect of his medical expenses under the Workers' Compensation Act.

The first question which arises is whether a contract between the Plaintiff and the first Defendant has been proved.

That Defendant concedes that there is proved a contract between it and a Company called Burns Philp (New Guinea) Limited in whose name the contract was made but says it does not know the Plaintiff. The Plaintiff says it was the undisclosed principal of Burns Philp (New Guinea) Limited and that it is entitled as such to enforce the contract.

To this Mr. Staunton says that the contract ought to be interpreted as one in which Burns Philp (New Guinea) Limited contract exclusively as a principal. He also says that although there is evidence that Mr. Garrett now represents the Plaintiff in his capacity of District Plantations' Manager employed by Burns Philp & Co. Ltd. which is the Managing Agent for the Plaintiff there is no evidence that at the time of the making of the contract Burns Philp & Co. Ltd. was the Managing Agent of the Plaintiff. He therefore contends that although Mr. Garrett may have intended to contract on behalf of the Plaintiff there is no evidence that at the date of the contract he was authorised so to do. If this be so then it is the law that the Plaintiff is not entitled to enforce the contract.

In my opinion the nature of this contract is such that the identity of Burns Philp (New Guinea) Limited as a contracting party was not of such importance to the first Defendant as to exclude the right of the Plaintiff to come in and enforce it as undisclosed principal.

Nor do I think that on their proper interpretation the terms of the contract stipulate or prescribe that Burns Philp (New Guinea) Limited contracts as principal only to the exclusion of the rights of an undisclosed principal.

Mr. Staunton's contention relating to Mr. Garrett's authority is based on too narrow an interpretation of the evidence. In my opinion, on a fair reading of Mr. Garrett's evidence, it does appear that Burns Philp & Co. Ltd. were the Managing Agents of the Plaintiff at the critical time and that Mr. Garrett did have the Plaintiff's authority to contract on its behalf at that time.

Mr. Staunton also submitted that if a contract between the first Defendant and the Plaintiff were proved the first Defendant's obligations at least were reduced to writing and had to be found in the writing and that the writing did not contain any term requiring the first Defendant to do the work with due care and skill or without rendering the premises dangerous to the occupiers. There is no such express term but having regard to the nature of the premises to be

treated and the knowledge of the Defendant of the purposes for which they were used and for which the treatment was to be carried out and the content of those terms which do appear in the writing, my opinion is that both the alleged terms are to be implied as terms of this contract.

I consider that the terms in question are incorporated in the contract and that reasonably careful and skilful performance of the work was part of the contractual obligation of the first Defendant.

On this basis it is not disputed that the cases against all three Defendants fall to be determined by reference to the allegation of negligence in the performance of the work.

The first and second Defendants are professional pest exterminators who frequently work in conjunction. Buildings in this Territory are frequently attacked by white ants, borers, termites of all kinds and the Defendants are experienced in the work of exterminating these pests when they have attacked a building and treating a building and its surround so that it will resist further attack. To deal with the usual invading ants and termites a technique has been developed which involves the use of powder and liquid spray. Powder is used with respect to ground ants as it is only by using ants journeying to and fro to convey the killing agent to the ant colony that the ant colony can be reached. Powder is a substance which a travelling ant will carry on his body back to the colony. Liquid spray is used to kill the colonies of ants in the upper timbers and to provide a protective film of Dieldrin of lasting and effective character over the timbers. Termites attempting entry of Dieldrin-protected timbers absorb the Dieldrin into their bodies apparently by contact and the effect of the Dieldrin is lethal to them.

To effectuate the killing of the termites already in the timbers and to provide the Dieldrin-covering a liquid solution is

used. It comprises Dieldrin in a solution of Dichlorethylene and Toluol which is itself mixed with kerosene in proportions of seven to one. When the mixture is properly made there is 0.5% of Dieldrin therein. This mixture has been in use by both the Defendant Companies for a number of years and the method of securing the proper mix is well established and although subject to human error, the probabilities are that any given quantity reaching premises for use is properly mixed. Thousands of buildings have been treated with it. In outline the method is to inject spray into the "galleries" or cavities where there are colonies of ants through a nozzle with a small hole (Exhibit 4) until the cavity or gallery is full and thereafter to spray the exterior of the timbers using a conical spray (Exhibit 5). In spraying the exteriors liquid is applied in one place until it commences to run off and the spray is then moved to an adjoining area where the same process is repeated. It is inherent in this that there is likely to be some flow on to floors from walls and generally from upper surfaces to lower. Whatever nozzle is used the emission of liquid therefrom can be stopped or started by the person directing the spray. In all cases the spray is delivered to the target under pressure.

To carry out the work the third named Defendant made a preliminary inspection of the premises on the 29th March 1957. On the 8th April he arrived at the premises accompanied by a native assistant and bringing with him a quantity of liquid, a pump and other equipment.

The Spraying continued in the Manager's house which was then occupied by Mr. and Mrs. Briggs, the Overseer's house, and outer detached office and two boiler houses during the 8th, 9th, 11th, 15th, 16th, 17th, and 28th April. I accept the evidence of Mrs. Briggs as to the order in which the work was done.

The issue is whether the work rendered the Manager's residence uninhabitable permanently or temporarily by reason of the deposit therein of Dieldrin in such quantity or otherwise that it would endanger the health of persons using the house as a residence or otherwise. If it did and the Plaintiff suffered damage therefrom, a verdict for the Plaintiff would follow.

On this issue the Plaintiff has the burden of proof to the extent of satisfying the Court on the balance of probabilities.

In support of its allegations the Plaintiff submits evidence designed to prove:-

- (a) that the liquid was delivered to the walls, cupboards, ceilings and other parts of the Manager's residence in excessive quantities;

- (b) that Mrs. Briggs actually became ill of a disease known as Purpura;
- (c) that Mr. Briggs actually became ill of the same disease;
- (d) that Purpura is a disease resulting from defective operation of the platelet manufacturing mechanism of the bone marrow;
- (e) that Dieldrin can be absorbed into the body by contact of the body with Dieldrin;
- (f) that Dieldrin absorbed into the body may make its way to the bone marrow;
- (g) that Mrs. Briggs and Mr. Briggs were not subjected to the influence of any toxic agent other than Dieldrin which would affect the bone marrow or otherwise induce Purpura;
- (h) that Purpura is caused and caused only by some toxic agent operating so as to affect the bone marrow processes adversely;
- (i) that Dieldrin is known to be a toxic substance when absorbed into the body of a human being;
- (j) that the ceilings were and still are stained by the spraying agent.

Naturally the Plaintiff urges that the fact that both Mr. and Mrs. Briggs suffered from the same ailment indicates that there was a common toxic agent operating to cause the illness of both.

This coincidence is said to support the view that the Dieldrin deposited in the house was in dangerous quantity and that it was the operative toxic agent.

The Plaintiff seeks to prove that the quantity of Dieldrin deposited on the house, cupboards, etc. was excessive principally in three ways: First, that it was applied with the wrong equipment and was caused to run freely from the walls so as to form minor floods on the floors and was in the sense slopped on to the walls, etc. rather than sprayed. Secondly, by showing that after the application of the liquid it performed in a peculiar fashion, namely, by producing crystals in cupboards and forming a recurring white powder on walls.

Thirdly, by showing that the occupants became ill of Purpura.

As to the first of these approaches to the problem, I believe that some of the liquid was directed on to some of the walls of the house by means of Exhibit 4 when normal practice would have prescribed the use of Exhibit 5, but a demonstration of the use of each of these nozzles indicates that if there was any difference between operating with the respective nozzles, liquid was delivered by Exhibit 4, if anything, at a less quantity for any particular period of time than by Exhibit 5. I do not believe that liquid was delivered in a stream of a one-quarter inch diameter or anything approaching that.

So far as the application of the liquid to the premises is concerned, the main witness for the Plaintiff is Mrs. Briggs. She says that on the 8th April the third Defendant sprayed the outer walls of the bedroom and the inner walls and that the spray was run over the floors and that it caused her to slip and fall.

She says that the floor of her bedroom was so wet that night that a full length mosquito net soaked it up from top to bottom and that a congoleum mat on the bedroom floor was saturated.

She says that the next day the third Defendant sprayed the floors and verandah rails and that spray ran everywhere over the floors.

After a day without spraying she says that the third Defendant returned and sprayed linen cupboards, store cupboards, food safe, etc. and the kitchen and bathroom also. She says that on that day spray was running out of the articles sprayed and out on to the verandah and over it on to the ground through gaps in the verandah floor, that the bathroom and kitchen floors were made very wet although the kitchen floor let the liquid through to the ground in numbers of places.

She said that after three days the third Defendant returned again and that on that day a native heavily sprayed an office outbuilding using great quantities of spray

The third Defendant sprayed the two following days doing the ceilings from a position between ceiling and roof. He returned on about the 28th April when he took furniture out onto an open cement floor and it was sprayed, covered and left to dry in the open.

As to all this, suffice it to say that I accept the evidence that copious quantities of fluid were sprayed upon all parts of the house, cupboards and furniture and that much liquid ran over and through floors. However, the direct evidence on the subject is necessarily imprecise and may well be exaggerated. It is impossible to draw from it any conclusion as to the actual amount of Dieldrin sprayed or poured on the house or whether the amount so

delivered to the premises was such as to cause danger of injury to the health of the occupants. All that can be said is that if it were otherwise proved that quantities of Dieldrin excessive in this sense were sprayed or poured on the premises the evidence of Mrs. Briggs of lavish use of liquid would be consistent therewith.

The Plaintiff's evidence did not purport to show how much Dieldrin was in fact delivered to the premises or what quantity would have been harmful. Nor did any person say that the mere fact that enough was delivered to run down the walls to the floor and create the impression of some flow of liquid over the floors necessarily imported that the quantity of Dieldrin was harmful.

It is said by the Defendants that the Plaintiff has not overlooked the cogency of direct evidence of the amount of Dieldrin in the house because it is proved that samples of the sprayed wood of the walls and cupboards were taken and submitted by the Plaintiffs to Dr. Bell and to somebody in England and the Defendant claims that the failure to call Dr. Bell or to state what use was made of the samples is significant. This is a comment which is obviously entitled to some weight.

Passing from consideration of the manner of delivery of the liquid, the Plaintiff next directs attention to what are said to be peculiar manifestations of white powder and crystals which were observed subsequent to the spraying.

According to Mrs. Briggs, about the end of April white powder appeared on all the walls, floors and inside the cupboards. She said that in consequence of this her husband had all the walls scrubbed and re-oiled. She said the white powder reappeared on the walls on two or three additional occasions and that her husband had the walls scrubbed and re-oiled four times altogether between May and December.

In addition she says that about eight months after the spraying, crystals appeared in cupboards, in her husband's lowboy and in most of the cupboards and chest of drawers and everything they were using for clothes.

She says also that the crystals appeared on the furniture that was last sprayed. Although Mrs. Briggs did not expressly say so, the suggestion is that although the crystals were wiped away, they reappeared.

So far as the powder is concerned, Mrs. Briggs is supported to some extent by Mr. James, the Managing Director of the second Defendant. He says that when he visited the premises in May 1957 he observed a condition on certain parts of the verandah which had the

appearance of a kind of white powder over the sprayed surface. Mr. Burns also saw what he described as white powder on a section of the outer wall of the bathroom on an occasion three weeks after the spraying. However, although he was at the house many times thereafter during the period up to September 1959, he never saw any further manifestations thereof. Mr. Garrett was also a regular monthly visitor and he never saw any white powder.

That something in the nature of white powder appeared after the spraying, I have no doubt, but I do not think it was as excessive or persistent as alleged by Mrs. Briggs. In assessing the weight of the evidence given by Mrs. Briggs in relation to all matters, it has to be remembered that Mrs. Briggs has suffered much, genuinely blames Dieldrin for all her troubles, and has reached a stage where the subject evokes emotional overtones calculated to cause exaggeration and error. The suggestion of the Plaintiff was that this powder was Dieldrin manifesting itself in that form because it had been applied in such quantity that the wood of the walls was unable to contain it and it was in some way, either by pressure from within the wood or by some other process, assuming a powdered form on the walls. The suggestion was that if it did this it must be in dangerous quantity.

However, no witness for the Plaintiff was specific either that the powder formed because it was excessive with relation to its purpose or application or that because it formed, it was dangerous in quantity. The phenomenon is used by the Plaintiff to suggest that the quantity of Dieldrin delivered on to the walls was lavish and so used, it forms a suitable background for the allegation of supervening illness.

Dr. Sibthorpe claimed no knowledge of the chemical action or the manner in which Dieldrin operates or changes after it has been sprayed or of the likelihood of Dieldrin appearing as crystals. Nor did Dr. Calov claim to be an expert on the solution or the physical properties of its component parts.

It is my view that the proper inference to draw from all the evidence of the alleged white powder is that the phenomenon is of no significance with respect to the question of the quantity of Dieldrin delivered or the harmfulness thereof. The appearance of a white powder does not usually follow spraying by the Defendants' solution. However, the evidence of Mr. Hughes and Mr. James, which I accept on this point, is that the solvents in this solution do affect some surfaces which have been polished or treated before spraying by causing such polish or previously applied substance to do what is called "bloom" and that the bloom has the appearance of a white powder.

With respect to the emergence of crystals in cupboards, Mrs. Briggs is supported by the evidence of Mr. Garrett and Mr. Burns and Dr. Sibthorpe. I believe that crystals did appear in a number of the cupboards of the house from time to time during the period from about the end of 1957 onwards until April 1959. Whether they reappeared in the same place after being removed therefrom I cannot say. The extent of the area covered by the crystals and their size, I am also unable to say.

So far as the crystals are concerned, I think the proper conclusion on the evidence is that they were Dieldrin.

But I am not able to assess the significance of these crystals. Indeed, neither the witnesses of the Plaintiff nor the Defendants help me to understand why the crystals formed. The suggestion is that they formed because the Dieldrin was deposited more thickly where they formed than it was in other places, but this is not established to my satisfaction. In such a matter, in the absence of the assistance of a technical character, I do not think I ought to guess. Assuming that this suggestion accords with fact, I am still without any expert guidance as to whether the mere existence of crystals in such quantities as are proved or even as alleged spells danger to health. Nobody has said in evidence that the presence of crystals or of any given quantity of crystals is dangerous to health.

It is clear that the mere presence of Dieldrin in a house is not dangerous to health. No doubt there is a critical quantity but the presence of any particular manifestation of crystals is nowhere stated to be decisive or even of any particular significance.

These considerations lead to the conclusion that in order to carry the burden of proof in this case, the Plaintiff needs to satisfy the tribunal that the illnesses of Mr. and Mrs. Briggs were caused by Dieldrin. If they were, then it is known that substantial quantities of Dieldrin were deposited and that Mr. and Mrs. Briggs were exposed to it. In addition, the illnesses in question flow from exposure to a toxic agent, and Dieldrin is a toxic agent.

Dr. Calov and Dr. Sibthorpe have sworn to a very strong opinion approaching certainty that these illnesses were caused by Dieldrin. Dr. Anderson, for the Defendants, is equally sure that they were not.

The illnesses in question were certain symptoms of trembling, lights before the eyes and associated symptoms suffered by Mrs. Briggs and Purpura suffered both by Mrs. Briggs and Mr. Briggs.

Purpura is a disease of the blood vessels just below the skin and it creates an appearance of myriads of little pin-pointed

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purple spots on the skin. This appearance is caused by multiple tiny haemorrhages from the capillaries.

The Plaintiff says that the spraying was in April and that it was excessive and that symptoms of Dieldrin poisoning appeared in May. These took the form of trembling fits of a few minutes' duration, dazzling lights in front of the eyes and a general feeling of being off colour. The fits were followed by excessive sweating and a feeling of weakness.

Subsequently, at about the end of September 1957, Mrs. Briggs came out in a rash, or what looked like a rash. This was the visible damage of the disease, Purpura. Mrs. Briggs consulted Dr. Sibthorpe, who correctly diagnosed the disease, became anxious on Mrs. Briggs' behalf and instituted a course of blood tests.

The first test showed a very serious deficiency in organisms of the blood known as platelets, the function of which is to repair the blood vessels. It is normal for the platelet count to indicate a figure between 250,000 and 400,000, but Mrs. Briggs' blood count registered only 10,000. This condition, coupled with the Purpura haemorrhages, alarmed Dr. Sibthorpe, as she thought there might be danger of other blood vessel haemorrhages, perhaps even to the brain, and she sent Mrs. Briggs to hospital and prescribed cortizone treatment. Mrs. Briggs was discharged from hospital on the 18th October but she remained under treatment by cortizone or prednisolone, a derivative thereof for a period of years. By the 24th October the platelet count was 205,000 but by December 3rd it had fallen to 90,000, and Mrs. Briggs was returned to hospital for a short period.

In April Dr. Sibthorpe discovered the blood count was 40,000 and continued the cortizone and prednisolone treatment and some A.C.T.H.

By June the count was rising considerably towards figures exceeding 200,000 and it so generally continued although with quite considerable variations until November 1959. The figure for November 1959 was as low as ninety thousand or thereabouts.

Mrs. Briggs visited Sydney between January 1958 and April 1958 and came under the care of Dr. Guiney, and she returned to New Britain in April feeling much better in health.

In April 1958 Mr. Briggs was found to be suffering from Purpura.

In June 1958 Mrs. Briggs ceased to live in the Manager's house and moved to Mr. Garrett's house in Rabaul, visiting only for monthly periods of two days including one night and one period of a week.

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In September 1958 both Mr. and Mrs. Briggs, in the course of their normal leave, went to Sydney where they were subjected to many and frequent medical examinations and tests under the direction of Dr. Calov and Dr. Bell, a Medical Officer of the Institute of Industrial Hygiene of New South Wales.

Notwithstanding all the medical services, the Purpura persisted, both in the case of Mr. Briggs and Mrs. Briggs. Mrs. Briggs still suffers from it.

Mr. and Mrs. Briggs returned to the Territory in January 1959 and thereafter lived in one of the houses on Londip other than that which they occupied in April 1957.

They retired in February 1960, finally leaving Londip in September of that year. Mr. Briggs died of Cancer in Australia on 12th October, 1960.

Mrs. Briggs stated in evidence that for some considerable time before the spraying of the house she had been in excellent health and that she had not had any troubles of a substantial character for a matter of years. However it subsequently appeared that she had attended Dr. Sibthorpe on occasions in February and March of 1957, namely on a day early in February, again on the 13th February and on 26th March, and that on the first visit Mrs. Briggs complained of giddiness coming on for some months, said that she was getting thick heads and a nauseating feeling in the stomach. On that occasion she had a blood pressure of 200 over 150 - a very high reading.

Apparently Dr. Sibthorpe prescribed Serpisol, a drug used to reduce blood pressure, because on 13th February Mrs. Briggs was complaining that she was upset by that drug. She was taken off the drug but on 26th March she was complaining of excitability and a tight feeling in the head.

From Mrs. Briggs' evidence it is clear that she put these attendances at some date considerably prior to 1957 when she said that they were for "slight blood pressure" and giddiness. Mrs. Briggs has since suffered a great deal and at present has a heart condition causing her considerable discomfort from time to time.

So far as the subsequent story disclosed by Dr. Sibthorpe's records is concerned, it appears that Mrs. Briggs attended her on 1st May when she appeared "not too well" and complained of more giddiness. On 14th May it appeared that Mrs. Briggs had put herself back on Serpisol, taking six tablets daily, and was advised not to take any more for a couple of days. On 28th May she was ordered phenobarb as a sedative.

There is no entry for June, although Dr. Sibthorpe thinks she attended in June, and the next entry is the 1st September,

when Mrs. Briggs was feeling much the same. Her blood pressure was 180 over 90. It is not until September 9th that there is anything referable to trembling or white lights before the eyes, when the entry reads "Has a bad turn following extreme fatigue, trembling, white lights before the eyes; sounds like a nervous reaction. Blood pressure 190 over 100."

Between this date and 1st October the Purpura must have appeared, because on 1st October the Doctor records the result of the first blood count.

It is apparent that the unassisted memories of Mrs. Briggs and Dr. Sibthorpe are not reliable on the dates of various happenings in relation to Mrs. Briggs' illnesses, and the only reasonably reliable guide on these dates are Dr. Sibthorpe's notes.

It follows that I am unable to feel satisfied that Mrs. Briggs' trembling fits and lights before the eyes occurred prior to September - that would be four months after the spraying. These are the first symptoms alleged to be the result of Dieldrin poisoning. Those symptoms passed away. According to Mrs. Briggs they ceased some time in 1957 precisely when she cannot say.

It is put by the Plaintiff that these symptoms and the Purpura resulted from a build up of Dieldrin in the body which operated on the central nervous system to cause the trembling and on Mrs. Briggs' bone marrow to produce the Purpura. In the case of the trembling symptoms, the Dieldrin must have passed into the body and into the blood and have been deposited adjacent to a nerve enzyme, with the operation of which it interfered.

In the case of the Purpura, Dieldrin must have entered the body, been absorbed by fatty tissue, passed from there to the blood, and from the blood into the bone marrow, and there have interfered with production of the precursors of the platelets and so of the platelets and thus have left the blood vessels without essential restorative aid.

This theory depends upon two conditions:

- (a) that Mrs. Briggs came into bodily contact with a sufficient quantity of Dieldrin to cause symptoms;
- (b) the establishment of the proposition that Dieldrin absorbed by the body may interfere with the work of bone marrow in the production of platelets.

Dr. Calov and Dr. Sibthorpe both asserted that they felt that these conditions are fulfilled. Dr. Sibthorpe did not discuss the effect of Dieldrin on the bone marrow and relied on the general proposition

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that certain chlorinated hydro carbons can cause Purpura, and Dieldrin is a chlorinated hydro carbon. It was argued that what one chlorinated hydro carbon can do another can do. Dr. Sibthorpe relied heavily on one American authority who made the statement that blood dyscrasia had followed exposure to benzene hexachloride and chlordane which were chemically related to Dieldrin. However, the authority added that there was no clear proof in any such cases of the relationship between the exposure to Dieldrin and the disease. The same authority stated that the workers who had shown convulsions and other signs of serious poisoning by Dieldrin had not shown thrombocytopenia or any other blood dyscrasia. Thrombocytopenia is the disease of deficiency of platelets due to failure of bone marrow to produce the precursors of the platelets.

It is clear that Dr. Sibthorpe, being puzzled by the appearance of the Purpura, believed that it must be caused by some toxic agent, and she searched for this agent and failed to find any to which Mr. and Mrs. Briggs appeared to have been exposed, save Dieldrin. Not being able to find any other toxic agent to which both Mr. and Mrs. Briggs were exposed and being slightly encouraged by the American authority, Dr. Sibthorpe came to the conclusion that Dieldrin must be the operative agent in this case. She does not know what dosage is necessary to produce symptoms in the human body or what is the time of reaction. She is perfectly frank that she knows of no other case of marrow disturbance in association therewith. She frankly acknowledges these facts, but relying on the coincidence of common illness on the part of Mr. and Mrs. Briggs, the relationship between Dieldrin and other chlorinated hydro carbons, and her inability to identify another toxic agent, she feels satisfied that Dieldrin is the cause.

Although displaying great interest in the problem presented to her, she did not make or direct any chemical tests to ascertain the quantity of Dieldrin which could have come into contact with Mrs. Briggs' body, nor were her researches successful in ascertaining what quantity of Dieldrin would be required to create the ill effects, nor did she know the amount of Dieldrin which was in the house or how Mrs. Briggs was coming into bodily contact therewith. Nevertheless Dr. Sibthorpe, in the isolated position in which she found herself, applied her self competently and sincerely to a problem which experts more favourably placed have failed to solve.

Dr. Calov came to the conclusion in November 1958, and so advised the Plaintiff's Managing Agent, the Dieldrin was possibly the cause of Mrs. Briggs' and Mr. Briggs' Purpura. He says that since then he has thought a great deal about the matter and as a result now feels practically certain that Dieldrin is the culprit.

His reasoning may be summarised along the following lines: Mrs. Briggs had some symptoms of a nervous character in May or thereabouts followed by Purpura in October. Mr. Briggs had Purpura at least in April 1958 and possibly before. It is reasonable to think that in each case the Purpura was due to a toxic agent and that the toxic agent was the same in the case of each affected person. A toxic agent to which each person is known to have been exposed at the material time is Dieldrin. Therefore Dieldrin is suspect. Furthermore, enquiries fail to identify or indicate any other toxic agent to which either or both of them were exposed. It is true that the only recorded reactions of Dieldrin poisoning are nervous reactions, but bone marrow may be affected by certain chlorinated hydro carbons and Dieldrin is a chlorinated hydro carbon. Therefore it is reasonable to conclude that Dieldrin can affect the operation of bone marrow and the fact that there is no recorded instance of its having done so cannot stand against what is in this case an otherwise inexplicable case of Purpura.

In this case this line of reasoning does not carry conviction, to my mind, even to the extent of a balance of probability.

Dr. Calov does not know what quantity of Dieldrin had to be absorbed to give any symptoms, even the nervous symptoms. He does not know how much Dieldrin was available to Mrs. Briggs or Mr. Briggs to be contacted by them, nor how much contact there was. He agrees that physical contact of skin and Dieldrin is the only method of absorption. He concedes that unless there is very considerable contact and absorption, the known propensity of the body to excrete Dieldrin swiftly will reduce the chance of injury to the bone marrow.

He does not know what period of time will elapse between contact and symptom. He assumes that what one chlorinated hydro carbon will do, another will do, but he acknowledges that persons actually seriously poisoned by Dieldrin have shown no dyscrasia of the blood.

He acknowledges that he has seen cases of thrombocytopenic Purpura in which he found it difficult to assign a cause.

He agreed that if the active Dieldrin were confined to cupboards, the chances of adequate contact would be reduced.

He is slightly puzzled that Mr. Briggs' symptoms appear some twelve months after the spraying and Mrs. Briggs' less than six months.

In considering the weight to be accorded to Dr. Calov's evidence, I could not but feel that although the subject under discussion was one in which the expert was necessarily required to reply to a large extent on information contained in recent medical literature, Dr. Calov had not succeeded in familiarising himself with what is available. In addition he had passed from a mental condition in which he felt that

Dieldrin was a possible cause of the trouble to a feeling that it was a probable and almost certainly the cause without any very satisfying basis for that progression.

In the consideration of the line of reasoning adopted by Dr. Calov, I think I should consider the evidence of Dr. Anderson that substances being members of the chlorinated hydro carbon family like members of other families do not have common qualities, that that family is numerous, and that it does not by any means follow that one chlorinated hydro carbon will affect a substance or piece of human body in the same way as another. This is supported by Mr. Black, the Chemist, called by the Defendant.

If one considers this evidence in the light of the admitted fact that persons severely poisoned and showing severe nervous disorders do now show blood dyscrasia, the inference that Dieldrin, although a chlorinated hydro carbon, does not affect bone marrow must be very strong.

If you add to this that the cases of Dieldrin poisoning noted have been numerous, the case is stronger.

Dr. Anderson says that in these cases there would be Dieldrin in the bone marrow but obviously it is not interfering with the production of platelets.

There seems to be much to support Dr. Anderson's conclusion that Dieldrin is actually in touch with the bone marrow in these cases because to get to the nerve enzymes which are affected the Dieldrin is in the blood and in it in significant quantity and thus is actually in the vehicle, namely, the blood, by which it reaches the bone marrow.

It seems to me also that on this aspect of the case, the Plaintiff's Doctor's reasoning must suffer if considered against the general background of practical experience in relation to Dieldrin.

It has been used extensively in Australia since 1954 and millions of gallons have been sprayed on a multitude of occupied houses by many workmen. In addition, since 1953 a solution of 15% Dieldrin has been available to the public and can be operated by unskilled persons. The number of persons who have been in contact with this substance in the same sense in which Mr. and Mrs. Briggs are shown to have been in contact must be very large, and yet no case has arisen in which bone marrow damage due to Dieldrin has been reported.

The other condition on which the theory of Dr. Calov and Dr. Sibthorpe rests is that there was adequate contact between the skin of Mrs. Briggs ^{and Mr. Briggs} and Dieldrin in this house.

I do not feel satisfied that there could have been any such degree of contact as would produce the disease of Purpura. In this conviction I must have regard to the evidence of Dr. Anderson as to the minimum quantity required to be absorbed into the body to cause any kind of symptoms.

Mrs. Briggs was an outdoor lady who worked a great deal in her garden. She had domestic assistance in the house. I have considered the likelihood of contagion through clothes but the more one thinks of it the less probable it becomes. All these considerations apply to Mrs. Briggs.

Were it not for the fact that it is reasonable to think that Mr. Briggs and Mrs. Briggs both suffered from exposure to one common toxic agent one would feel satisfied that Dieldrin was not the cause of the illnesses. My general inclination is in this direction.

It is, however, puzzling that the toxic agent cannot be identified. It has to be remembered however, that there are stated to be many cases of Purpura, commonly known as Idiopathic Purpura, in which the agent cannot be identified although it must exist. This case must remain one of those in the absence of further evidence or knowledge of the substance being dealt with.

Ultimately therefore I am not satisfied on the balance of probabilities or at all that any of the illnesses of Mr. and Mrs. Briggs were caused by Dieldrin.

In these circumstances I am not satisfied on the balance of probabilities or at all that the Plaintiff's house was contaminated by the Defendants negligently or otherwise.

There must therefore be judgment for the Defendants with costs to be taxed.

SMITHERS J.