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### **Submission to People's Inquiry – 61**

**Exposure: lived in spray zone (plus worked in hot spot)**

**Oral testimony: Yes**

#### **Peoples Inquiry Statement - March 2006**

It is with overwhelming loss and anger that I write this statement. It is hard to know where to start and what to say when there have been such far-reaching repercussions in our lives as a consequence of the aerial spray programme for the painted apple moth (PAM) that MAF instigated. I say 'our lives' because I am not an island unto myself. I am also a mother, a wife, an extended family member and at the time I was business partner in a catering company we established in 1999. Every person who has had anything to do with me over the spray period from my children & husband through to my business clients, dentist and my child's drama or swimming teacher (ongoing cancelled and rescheduled lessons) has been affected by the MAF aerial spraying campaign against the PAM. My story is not about forest protection or monitoring how many moths are in traps, or about safe health practices coming about from purely physical well-being. I am a person who has normally maintained very good health – physical, emotional, mental and spiritual.

From the moment of the first spray that I experienced in spring 2002 there has been a complete invasion and intrusion on our lives. Within 24 hours I was experiencing severe headaches, giddiness, nausea and vomiting, constant nasal drip, sore throat and runny eyes. I spent 3 days in bed and 8 days with ongoing discomfort and symptoms. My newborn child was around 6 weeks old, my older son 4, and our business was in pre Christmas catering mode. I know that I am sensitive to some chemicals. I have learnt to avoid certain supermarket aisles, highly perfumed pharmaceuticals, and certain cleaning agents amongst others as they can set off any of the above symptoms. I also realised in retrospect that I had similar reactions to the Tussock moth spray in East Auckland in 1996. At that time I was temporally living with a friend for 6 weeks between homes and did not make the association between the early mornings fly past and my consequent ill health. In fact I failed to sit 2 university exams due to nausea, giddiness and vomiting and was consequently awarded aggregate passes.

My awareness this time was different. Our initial calls to the 0800 PAM help line were treated with disbelief and denial. Other suggestions were made as to the causes of this sudden onset of sickness. I persevered and was eventually referred to an Aeraqua doctor. At this meeting with the [MAF] doctor it was offered that I take antihistamine as a counter to my reaction. Sitting there in the room breastfeeding my new born baby I was somewhat taken aback at this suggestion. When I pointed this out it was decided that evacuation would be the best option to take care of my health and well being during spray times. I was told and reassured that studies showed I could safely go home 2 hours after spray was completed. As it panned out coming home any earlier than 40 hours after sprays completion resulted in symptoms that made me unwell enough to make an early arrival home not worthwhile.

Leaving home for days at a time with two young children and a business to run became a regular nightmare. Despite organisational lists and attempts to put systems and support in place the unpredictable nature of the weather dependent spray programme prevailed. There were times when we were away from home for up to 8 days, only to repeat the process a couple of weeks later. 4.30am wakes ups and the constant moving and changes altered the sleep routines of my children. There was even one occasion where I had to move motels within the spray itself as the room had not been booked for enough days. The effects of this upheaval on our family's well being were huge.

Away and at home my 4 year old began to wake more often during the night than my baby. For me exhaustion was complete and there was no way to catch up either. I would get home to unpack. This task itself took hours. Exhausted, my patience with my children was compromised. Try to understand the effort involved. Here is a basic list of what was packed and unpacked for spray days remembering that I never knew exactly how long I would be away for – at least 48 hours but with Auckland weather probably longer.

- Clothes for me
- Clothes for an active 4-year-old boy
- Clothes for a baby (who was a wonderful spiller!)
- Nappies, and wipes
- Games, toys and activities
- Toiletries
- Bed and bedding for the baby (after 6 months Aeraqua reimbursed me for a Porto cot)
- Food – dry goods & chilli bin (after 6 months Aeraqua made meal allowances)
- Office needs to maintain my business obligations (after 3 months I was allowed \$7.50 of phone calls per day).

I must also note here that I had many communications with the Aeraqua nursing staff regarding my increasing stress levels and asking for help before some of these most basic measures were put in place. It was then made clear to me that I was not to let anyone else know that I had these perceived privileges, as others would take advantage. I have

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copies of a couple of emails from this time where I state very clearly my decreasing ability to maintain my mental health and manage my everyday life with this ongoing campaign. Aeraqua were always very slow with their response and their staff incapacity to make decisions often added to my stress. Simple help measures panned out to months of having to repeat my requests to various people within the organisation. What precious time I had was being taken having to spend more time and energy on these matters. My GP, concerned at the state of my health also requested help, sending a letter with her observations of me at this time. I even sent a letter to Murray Sherwin in January 2003 outlining the impact of the spray on my family and the financial costs involved. I suggested that MAF could benefit from talking to some of the people at the evacuees breakfast location to try to understand the impact ongoing spray was having on people as they assessed this programme alongside possible alternatives. They never came.

Neither to my knowledge did the (so called) Community Consultation Group that MAF carefully reselected ever communicate with me in spite of asking Aeraqua support specifically to be contacted by them. It seems it was easier to make their decisions without consideration of the basic human rights of those who were being impacted on. MAF also answered that there would be no financial assistance to deal with the financial costs this was having on my family. Clothing, washing, food away, toys away, office files unpacked, and then the process would begin again of trying to catch up; business tasks, housecleaning, children's activities, rescheduling cancelled appointments. Routines and plans became something from a previous life. My proactive and organised approach to life became reactive with constant changes and disorganisation beyond my control. I had a busy schedule anyway being a mother and business partner without the spray factor to consider. Now the spray had to be my first consideration. There was no respite.

Meantime my husband is doing his best to keep some sense of normality in our business. For the first 6 or 7 months he was largely unable to join us for sprays, and if so it was late at night to offer me some support and coordinate business before leaving at the crack of dawn. It was not good for our relationship or business partnership and placed a huge strain on us as a couple. We would invariably end up in arguments around spray days as we juggled schedules, and our roles. The more tired and stressed I became the less capable I was able to function. My home was in constant chaos of half packed bags, toiletries etc.

I was unable to employ a regular nanny for our baby because of constantly changing schedules. I would struggle to complete work that had to be done to maintain the business and never got a chance to hook into the natural growth we were experiencing in our business – the spin off of a few years hard and good work. Our catering business was showing great growth by word of mouth. Time constraints dictated by the spray schedule never allowed us to follow up on marketing opportunities with prospective clients. Our business growth was being severely stunted. We have consequently asked ourselves what the cost to us was in lost business potential. Based on the 25% growth the business showed each year the cost would have been at least \$40,000 in that first year.

We purpose built our commercial kitchen 2 kms from home to allow us the lifestyle of being our own bosses and still being close to home and family. This would allow my husband to pop home and share meals and family time with us and still be 1 minute from the kitchen. It also made it completely viable for me to run the office from home, be close enough to the kitchen and be the primary caregiver to our children. Unfortunately the kitchen was in a 'hot spot' – sprayed between sprays as well as on other spray days. This made it very difficult for me to spend any time there. Business became more and more difficult for me. My finger was no longer on the pulse. I was alienated from the core of our business – the kitchen. Everything became a compromise to accommodate me having to leave the area for spray. Staff recruiting was far from ideal in this pressured scenario leading to some problem staff. My special needs changed the whole balance and demanded that others take on roles that were not necessarily suited. I did everything I possibly could to put systems in place to try and counteract the plug coming out on our business. This included a contract with a consulting company to give me the tools I needed to try and get back on track with hooking into our growing business. Even this fell apart as I cancelled and rescheduled meetings around work that had to be done and spray days. Things over and above maintaining the books and returning quotes and emails became too much to deal with. In order to take care of my borderline mental health we prioritised my husband joining us during spray days away as much as possible. This involved paying more hours for other staff – more money on wages. Money that would have otherwise been our profit, our drawings, the cream of our hard work and initiatives. Enough money was lost that could have made a difference to our future choices. Instead we stayed in the cycle of just making ends meet.

The final spray was also the final straw. Delayed by a few days due to weather meant some last minute changes needed to be made to accommodate an important catering event. I had a short time before school finished to once again rearrange well thought out and managed arrangements, pack the car, organise the house and children let alone think about dinnertime. I was an empty shell; I had nothing more to give to anyone. I couldn't do this anymore. I sat down and wept, this time in front of my children. My thoughts were everywhere – do I need to ring someone and get them to come and take my children or me away. I felt unsafe and emotionally very unstable. I managed to get myself together with the thought of the long-term consequences of a complete breakdown being too scary.

I could go on with many more examples of how the spool unravelled for me with our business.

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My place of work had become unsafe –namely my home. I could no longer carry the stress of maintaining a business and caring for my family with the ongoing unknowns. My husband and business partner could not bear this any longer and together we decided to sell the catering business.

In July 2004 we left the catering business with the new owners. They got a good deal. My health was worth more to us than waiting for a better offer and after 6 weeks on the market we sold our business for \$50K. Two business consultants told us it was worth \$120 - \$135 K. We needed a quick sale so put it on the market at \$99K and dropped it again to \$70K a few weeks before we sold at the lower price as my health situation worsened. After all we had been through for the previous 19 months and with me displaying many symptoms of Post Traumatic Stress Disorder we didn't have the stamina to negotiate. This is another major loss for us of income, which has been directly incurred due to the MAF aerial spray operation.

A week after the final spray operation that autumn I had a major anxiety attack at 3 in the morning. I consulted once again with [ ...], a counsellor who was recommended to me by another one of Aeraqua's doctors. I didn't understand why I was reacting the way I was when at last the campaign was over. Apparently it is quite normal for people to finally lose control after a difficult event is over ([the counsellor] called my ongoing reaction "Post Traumatic Stress Syndrome"). It seems that this was the case. I had been holding it together albeit by a fine thread until that point.

Aeraqua – otherwise referred to as "the PAM Health Service" was supposed to provide advice, assessment and practical support to members of the community so they might avoid any negative effects associated with the spray".

From the ill advice from my initial consultation regarding antihistamine and amount of time needed to stay away my contact with this "support" organisation only served to increase my stress. Various emails and phone calls to nurses would be unanswered for many days or weeks. The right hand didn't seem to know what the left hand was doing. I clearly communicated to various staff at Aeraqua what was going on with my health and what I needed in order to avoid any further negative effects associated with the spray. It took much emotional effort and 3 meetings having to repeat my requests before some of the discussed measures were put in place. All this in my already time poor schedule around sprays. It was at this point that some financial help was put in place to ease my load during spray and I was allowed to consult a counsellor on Aeraqua's account. Permission was given for 4 appointments. I saw the counsellor twice in April & May of 2003. It helped me to understand and release some of the tension and anxiety that I was experiencing. Huge respite came in the decision to put more money on our mortgage and take a trip to see family in the Middle East. The break gave us a chance to breathe and be together as a family. The large expense seemed small to regain my composure and actually get some space and time for pleasure and joy. We didn't believe that MAF would review the health outcomes for me and others like me and decide to continue its aerial campaign over the summer of 2004. How naïve.

Once again we were on the treadmill. There were staff changes at Aeraqua and I was dealing with new people all the time. The reimbursements for basics like petrol, laundry, food vouchers that I had negotiated previously with the [second] MAF doctor were no longer being paid in full. I had to follow up on payments, recheck payments and was constantly questioned regarding what was due to me. Some of the allowances went by the way. By this stage I didn't have the time or energy to deal with Aeraqua more than was required. It had become more stressful than negotiating the extra dollars. I was being treated with suspicion and made to feel like I was inconveniencing them. Inference was made and reported in the media that side effects from the spray were all in my head. Unfortunately what was a physical reaction was now having emotional consequences for me. In March I realised that I was becoming extremely anxious again. Counselling had helped me prioritise things the year before and I knew that I had a couple of appointments that had been approved. I made an appointment and told the nurse at Aeraqua that I had done so. She informed me that this was not going to be reimbursed and that I needed to go through the process again of seeing a doctor to decide whether this was needed. At the appointment I was told by the [first] MAF doctor that she would have no problem making a decision to refer me to a skin specialist but that no one else had been to see counsellors and it was not within her jurisdiction to make the decision if I needed counselling support. I had to wait for approval from Dr. Francesca Kelly. This took over a week. Aeraqua paid for one more counselling appointment at this stage. I continued to see the counsellor on a regular basis for many months after the spray campaign finished as I dealt with the mop of grief and loss, which had been directly caused from this spray campaign.

At some point in this terrible journey I laid a complaint with the Human Rights Commission of New Zealand. A meeting was arranged between myself, MAF and Aeraqua for mediation in July of 2004. The outcome of this meeting was unsatisfactory to myself and my complaint is still an open case with the HRC of New Zealand.

As a consequence to the above meeting Aeraqua recommended and paid for me to see a neuropsychologist – Dr [...]. I have enclosed his analysis of myself written in August 2004. (see appendix 1) Aeraqua's initial response is also enclosed. It took Aeraqua and MAF until December 2004 to approve the [second] MAF doctors' recommendations of further counselling funding being made available despite my calling them on several occasions.

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To this day I am baffled MAF and Aeraqua have never acknowledged that counselling support should have been one of the basic forms of care in a campaign that extended for 2 and half years.

And to my normal pleasures in life:

- The joy I got from spending time in my garden was gone. It was vital down time for me – half an hour a day with extra hours every so often. My eldest and very active child alongside me. My pleasure.
- [...], my son, missed the garden. He missed his relaxed and happy mother who spent a lot of our time together at home outdoors where he most loved to be. My growing inability to cope and lack of patience was reflected in his behaviour at home.
- We used to grow a lot of our own vegetables, we planted a fruit orchard, and many brightly coloured flowering plants. For 4 years we had weed patches and long grass. This summer is the first time that I have been able to be out in my garden without anxiety and have once again planted a vegetable patch.
- Garden was a mess. Completely overgrown. This added to my depression and huge sense of loss. Plants died. Others have grown in ways that are not ideal due to lack of care. It has involved a huge effort to regain some sense of order and belonging to our outdoors area.
- Social life- it became very hard to make social arrangements. We missed out on some special social occasions with friends due to relocation.
- My usual nature has always been happy and bright. Over those years I found it increasingly hard to socialise with my heavy sadness and sense of loss.
- My previously happy and active sexual life became stressed over this time.

The MAF aerial spray operation has caused me deep psychological damage and harm. These were not pre-existing conditions but are born of this spray campaign. In order to hopefully preserve my physical well-being I have jeopardised my emotional and mental well being. I say hopefully preserved my physical well being because from my information we have no knowledge or studies that can show the long term effect on my health of this amount of spray exposure, residues of which remain on my home, in my garden and in most the places that I carry out my day to day living. I do wonder if something will come to light in 5, 10, or 20 years – and then what? (As is the case with the people of Paritutu in New Plymouth and the 245T plant)

Overseas sprays in Canada were only executed 3 times a year and always over by 7am in the morning. On what basis did they decide that they could execute sprays every 10 days in my local area for almost 2 years and often spray well into the day?

What sort of reassurances and evidence can they give me regarding my long term health with the high levels of saturation of my daily stomping ground with Foray 48B ?

My human rights were violated due to my pre existing disability of a chemical sensitivity. MAF's disruption of my life, their inability to advise, assess and support professionally my reaction to the spray and the ongoing consequences and losses for me and my family need to be answered for.

When recommendations were made by MAF to the government to aerial spray, why was there no economic assessment in it of the real health and social impacts of aerial spraying on families like ours?

MAF cannot offer me recompense for many of my losses due to time. MAF cannot give my two children back the time they have stolen from them, the mother whose parenting was so often compromised by something beyond her control.

My husband suffered. I was a constantly compromised wife and business partner. The frustrations that he had to suffer at his inability to change things & his dreams for our business turning to nightmares.

I asked MAF to please ease parts of the loss.

- They could acknowledge that the impact of a two and a half year programme on people like me was underestimated.
- They could acknowledge that the illness as a result of exposure to the spray was a physical reaction and not psychosomatic.
- They could pay for the work that was required in my garden to help me re establish that joy and peace.
- They could compensate us for the lost finances in our business and they added costs that continual relocation placed on our family.

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Needless to say MAF are not interested. I have worked on finding my own sense of peace. Peace begins when expectation ends.

It has been a very hard process revisiting these dark times. What does make me feel happy is the realisation of how happy and how far I am from that deeply anxious place I was in 2 years ago. It doesn't bear to think about the possibility that a government could make a decision to repeat a campaign like PAM and once again ignore the huge human cost.

Thank you to The Commissioners for taking your time and coming here and listening to our stories. Thank you to Hannah and the other hard working members of the various anti spray groups who have believed, acknowledged and supported us through out.

Thank you to the other spray evacuees, who despite their own difficult situations would still find the time and energy to offer me a hand, especially in the early days when I was on my own with 2 small children.

Thank you to my husband, children and family for showing me love and light always.

My lessons, learning and understanding continues to unfold...

***He moana pukepuke e ekengia e te waka. A choppy sea can be navigated.***

**(Appendix (4 pages) attached)**

***End***

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Ψ

[REDACTED]  
MBChB FRANZCP  
Specialist Psychiatrist

13 Aug 2004

[REDACTED]  
Herne Bay  
Ph 09 [REDACTED]  
Fax 09 [REDACTED]

Dr Francesca Kelly  
Aeraqua Medical Services Ltd  
PO Box 28424  
Remuera  
Auckland

Cc: [REDACTED]

Dear Dr Kelly

Re: [REDACTED]

Thank you for referring [REDACTED] for psychiatric opinion.

I saw her on 11 August 2004. As you know, [REDACTED] has suffered from a number of symptoms since the inception of the painted apple moth spray programme in West Auckland and as a result over the last 2 years has been relocated during times of spraying. I did not have available to me today any of the previous medical notes pertaining to her reactions to the spray though she gave me a very good history of what had occurred over the last 2 years.

[REDACTED] told me that the day after spraying had started she had felt 'woozy' and then began to vomit. She found that this was a consistent response to the aerial application of the painted apple moth spray. She told me that in addition to the vomiting she would also suffer from some irritation of her nasal mucosae and would suffer a dripping or running nose. She did not describe to me any other significant neurological symptoms or any breathing difficulties.

At the time of the start of the spraying programme [REDACTED] was approximately 5 weeks post-partum with her second child. Her children are now aged 6 and close to 2 years. Over the time period of the spray programme [REDACTED] told me that her ability to cope with her family, her parenting role and her business gradually eroded. She felt on reflection that this was largely due to the disruption to her normal routines that resulted from her and her family being relocated. She told me that she felt she initially coped but as the programme wore on she found it increasingly difficult. She informed me that she had requested help with this and as a result had seen [REDACTED] for counselling. [REDACTED] said that this had been very helpful in terms of problem solving and helping her to cope with the general disruption she and her family were experiencing.

At one stage in an attempt to get some control over her life and to feel somewhat better [REDACTED] and her family went overseas for 3 months. During this time she says she was well and despite the obvious strains of travelling with 2 young children she did not feel particularly stressed or physically unwell.



██████ has no previous significant psychiatric history. She did seek counselling following the breakup of her first marriage back in 1992. She has not previously seen a psychiatrist or been diagnosed with any psychiatric disorder.

Her medical history is notable for infectious mononucleosis as a teenager. She told me that she was badly affected by this and remained off school initially for 3-4 months. She described to me having 2 relapses over the next 2 years before complete resolution of the disorder. There is no known history of any previous autoimmune disease or definite anaphylaxis.

██████ however, told me that even prior to the spray programme she had a number of what she termed "sensitivities". She told me that she found it difficult to go into certain aisles of the supermarket or pharmacies, and that she would often have a bad reaction to certain types of newsprint, primarily based on their smell. She described to me her reaction in these situations as generally feeling what she termed "a bit woozy". She denied that she had ever had any attacks of vomiting or any other symptoms as a result of exposures to these situations. She denied any particular avoidant behaviours. In terms of her diet she told me that she suspects she is sensitive to milk as some dairy products result in diarrhoea for her. She informed me that as a result of this she does not drink milk or eat cheese. She also restricts her intake of wheat but appears to have a reasonably balanced diet. She has no history of extensive hospital investigation or referral to medical specialists. There is no previous history of post-natal depression following her first child and, on reflection, she does not feel she was suffering from depressed mood or anxiety in the period immediately following the birth of her second child. The only medications or supplements she currently takes is Intermittent Vitamin C.

There is a family history of haemochromatosis and ██████ told me that both of her parents have been diagnosed as carriers for this disorder. She is the mid child in a family of 3 daughters and both of her parents are alive and well and also living in West Auckland. She told me that her younger sister had also had a reaction to the spray which sounded to me to be primarily asthmatic in nature.

On questioning ██████ told me that towards the end of the spray programme she noticed herself becoming anxious and depressed. She had at least one clear cut panic attack (nocturnal) towards the end of May. Currently, she describes herself as feeling that she is improving. When I asked her what she meant by this she told me she was feeling generally less tearful, better able to cope and slightly less anxious. She did not describe any ongoing or severe panic but said she did feel somewhat anxious when she thought about what might happen in spring. By this she told me she was worried about any potential decisions to restart the spray programme, if necessary. ██████ did say she was feeling better also for re-establishing her normal routines and beginning to act as a more effective parent.

██████ also told me that she thought her sleep was improving and that her concentration had also improved somewhat. All of these improvements appear to coincide with the cessation of the programme and the need for her to be removed from the spray area. She currently described her energy levels as being 5/10 and her mood on most days as being 6/10. She felt, however, that the latter was steadily improving. She did not describe any diurnal variation in mood.

On examination I thought her affect was moderately anxious. She denied any acute or discrete panic attacks currently. There were no obsessional or compulsive symptoms. Subjectively she described some ongoing irritability. She said she also did not feel that she was able to completely take on all the tasks she had previously coped with and an example told me that while her husband wished them to go away on a holiday soon she could not face the task of packing right now. ██████ did become tearful at one stage during the interview while describing her limitations and current feelings.

Diagnostically I think that ██████ has been suffering from a Major Depressive Episode with intercurrent anxiety. While she has had at least one discrete panic attack I do not feel she has Panic Disorder. She does not appear to suffer from any other form of Anxiety Disorder. She has no previous history of early onset anxiety disorder or Affective Disorder predating



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this episode. She described herself to me as a person who normally copes with adversity and does not like to ask for help. It seemed to me that the extended period of disruption to her life, particularly when she had a young child and its impact on her and her ability to run her business and family has been a major contributor to her depressed mood. On cessation of the disruption she appears to be gradually re-establishing her routines and her symptoms appear to be improving.


Her background history is not really compatible with a diagnosis of Somatoform Disorder. While she did have some concerns about the effects of certain smells or products in the environment this had not resulted in substantial abnormal illness attribution beliefs or significant avoidant behaviours.

### Recommendations

1. [REDACTED] symptoms do appear to be spontaneously resolving, albeit quite slowly. I feel she could benefit significantly from supportive psychological assistance over the next 3 months. I would strongly recommend that she re-attend [REDACTED] for supportive psychological work twice a month over the next 3 months. It seems reasonable to me that the Aeraqua Programme support this as her symptoms appear to have arisen from the disruption by the spraying programme.
2. If [REDACTED] depressive and anxiety symptoms are not fully resolved in 3 months I would recommend that I reassess her in terms of other treatment options. I have explained to her that I think she should continue to improve with the re-institution of her normal routines and getting some control back into her life.

Kind regards

Yours sincerely

  
Dr [REDACTED] MBChB FRANZCP  
Consultation-Liaison and Forensic Psychiatrist



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7 September 2004

Dr [REDACTED]  
[REDACTED]  
Herne Bay  
AUCKLAND

Dear Dr [REDACTED]

RE: [REDACTED]  
[REDACTED]

Thank you for your letter about the above patient, received on 23 August 2004.

As you have documented, [REDACTED] has experienced various symptoms at the time of the spraying programme as a result of which we assisted with her request for relocation at spray times.

I note your opinion that she has been suffering from a Major Depressive Episode with intercurrent anxiety and that you have noted no previous history of Affective Disorder predating this episode. I also note your view that the disruption to her life particularly when she has a young child has been a major contributor to her depressed mood. Our team was aware of the situational stress [REDACTED] was experiencing during spraying and offered her a number of GP visits to discuss the effects of relocation and took the unusual step of paying for a number of counselling sessions to assist her to cope.

I note your observation that this supportive psychological assistance could be beneficial and that you recommend a further 6 visits to [REDACTED]. I am also aware that more counselling sessions took place than the three we funded and my referral to you was in the context that [REDACTED] was still expressing to me her distress even after already attending counselling.

Since the discontinuation of the current aerial spraying against the painted apple moth (PAM), the PAM Health Service has been closed. Therefore, MAF need to approve special measures to support such counselling visits, at this time. I have informed them about the situation and your request.

Yours sincerely  
PAM Health Service

Francesca Kelly

Dr Francesca Kelly, MB ChB, DCommH, FAFPHM, FRACMA  
Medical Director

FK/kh

Cc: [REDACTED]  
[REDACTED]

End

**Submission to People's Inquiry – 62****Exposure: lived in spray zone****Oral testimony: Yes**

If Aerial Spraying resumed I would have to move out of West Auckland for the duration of the exercise.

I had been asthma free & medication free for several months, because I adopted a diet free of chemical additives which included No preservatives (which I believe the spray contains).

After the first or second aerial spraying, I had to use my bronchodilator (on communicating this fact to the doctor, she offered more medication. No interest whatsoever in prevention & in speaking out against aerial spraying).

Early November 2003 I moved out of West Auckland. Bought a cheap property in the Franklin district & stayed there for 18 months. I wasn't relocated by M.A.F. But my own relocation.

Briefly my Asthma History:

1. Many years on Prednisone.
2. Hospitalized at Greenlane Hospital for eight days in the mid 1980's after our family doctor prescribed a cough mixture. Immediately after taking the mixture I could not breath, peak flow of 90 to not registering.

Today I eat 90% organic – unrefined food and I'm medication free.

***End***

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**Submission to People's Inquiry – 63****Exposure: lived in spray zone****Alan Samuels****Oral testimony: Yes**

To the Commission of the 'People's Inquiry'

*This personal submission is considerate of a number of categories i.e. Moral, Ethical, Health, Ecological & the Political Process. Not necessarily discussed in that order.*

I first became aware of the large scale aerial spraying operation over West Auckland when I read about this in a local newspaper. Virtually all of West Auckland was about to have Foray 48b pesticide (*a chemical concoction*) sprayed over it. This included residents and non-residents as well as children, animals and pets, birds and wildlife, vegetables and flower gardens and all that lay in the path of the Spray Aircraft.

Aerial spraying in West Auckland was an accord and an agreement between the Ministry of Agriculture and Forestry (MAF a govt. dept.) and the then Labour Government which ratified the operation. The Government invoked the Bio-Security Act as a safeguard to any opposition, meaning there could be no recourse for those who were opposed to the aerial spraying, for any reason whatsoever. This was just one aspect I found quite disturbing.

There was also the blatant disregard for the process of Democracy, this being totally undermined by those who were then holding positions of influence and power. Our locally elected MPs (Labour MPs) in the spray area were not interested in listening to our concerns. This brought frustration to those opposed. In due course this served to firm my resolve. It made clearer to me the injustice of the decision to aerial spray and the sham of the Political Process authorising it to go ahead.

So much so was my anger and frustration that I e-mailed Erin Brockovich a partner in the law firm Masery Vititoe in the US. (please refer emails attached). At about the same time I sent a letter to HRH the Prince of Wales. I cannot reveal its contents at this stage as it could possibly undermine confidentiality between Prince Charles and myself.

Other manifestations of my frustration and anger at what I see as injustice by the NZ Government has been my co-organising through Sprayfree Coalition (an anti aerial spray body made up of what was then local residents and people concerned with the effects of the spray), two public marches and rallies.

These marches and rallies gathered many concerned locals, approx 1000 people or more to each. They were supported by many local dignitaries and some genuinely supportive MPs but sadly lacking the appearance of involvement of our own locally elected Labour MPs. Again this did nothing except to lead to what I saw as a lack of respectful and meaningful communication on a local basis. In essence Local MPs had to toe the political party line or else.

Once the aerial spraying started in earnest, reports from people that were being affected started to come in via Sprayfree Coalitions' E-mail address [sprayfree@hotmail.com](mailto:sprayfree@hotmail.com). The stories these residents told were quite upsetting. I started to get the feeling of powerlessness as more and more reports started to come through. All I knew was, that I must continue along with what other residents wanted and to endeavour to put a stop to what I term 'an abomination'. To me, spraying people against their will is immoral and unethical. Nothing will ever change my mind on this. I'm very passionate regarding my opposition to aerial spraying and it is this principle that keeps me going.

On a personal level I myself, have experienced adverse health effects from the spray. I noted that later on either on the same day as the spraying or during the following day, whenever I blew my nose there were traces of blood on the tissue used. It wasn't much but it was certainly present. This was not something that I would normally experience.



My digestion has also been out of sorts, particularly since the start of aerial spraying. I visited my own doctor for stomach problems i.e. excessive acid forming in the gut/stomach and was put onto medication to combat the problem. Since the start of aerial spraying I have had to return to my doctor a number of times to have medication reviewed and as at present I'm on stronger medication than when I first visited my doctor about this particular ailment. I've also had endoscopic treatment to check my stomach. The physicians told me they found little amiss. This does not however, take away from or make less the fact that I still get discomfort in my tummy and abdomen even now. I'm convinced the content of the spray has had and still is having an affect on my digestive system.

Asthma is something I have suffered with all my life. Again, the spray aggravated this. I obtained my personal medical history as a printout from my doctor. It showed that my symptoms and my medication were all increased from around the start of the aerial spraying. I'm absolutely sure this is no co-incidence.

I have done some personal research/reading on the adverse reactions caused by chemicals etc on or in the body. The conclusions I have drawn from this. Everyone has a different level of tolerance to the effect of chemicals and/or live organisms on the body. In all of us our physiology is different, so the level of effect that chemicals and live organisms have on us may differ greatly. Also, we each have different levels of awareness as to the effects of chemicals on our bodies some may discover this immediately others could take time neither is wrong.

It is not without some thought (although not much thought, I might add). I'm convinced the administering of chemicals on and into our bodies and our environment is bound to upset the natural balance of the ecological system in which we live. If we do not make a stand here and now to highlight what has been done to our community, then what hope can we have for the future and for generations that follow.

Dear Commissioners, thank you for listening to our stories.

Yours sincerely  
Alan Samuels  
Co-founder Sprayfree Coalition

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## APPENDIX:

Copy of series of emails between Alan Samuels and Masry Vititoe in sequence order:

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1. From Alan Samuels to Masry Vititoe  
Monday 19<sup>th</sup> January 2004

Dear Ms Brokovich

What would be the best method of communication with you, regarding the plight of citizens that are being affected by the Aerial Spraying of Foray 48b over large residential areas, here in Auckland New Zealand. If we need to phone you and talk to you we would be happy to do that. Otherwise we could perhaps continue dialogue by way of E.mail. although, unsure of secure privacy.

We (the people affected and opposed to this form of spraying) have a rather sad and incredible story to tell. All legal avenues taken so far by residents to stop this aerial spraying have come up against a brick wall, namely, the NZ Govt.

We have even gone so far as to inform HRH the Prince of Wales by way of letter but have yet to receive any acknowledgement of the letters' receipt by His Royal Highness.

Personally I do not believe HRH would sanction or for that matter condone what is taking place here in NZ or for that matter in other parts of the world also, namely in your own USA and Canada where Foray 48b is also being sprayed over residents.

Please, do you have any suggestions and are you able to help in any way?

Thank you for taking the time to read this. We eagerly await your reply.

- 
2. From Alan Samuels to Masry Vititoe

*Please treat this information with respect, and honour the privacy of everyone who has had the courage to participate*

Thursday 22nd January 2004

Dear Ms Brokovich

Recently, that is within the last week, I sent an E mail asking how we could best make contact and discuss the situation of how it would be possible to stop the aerial spraying of citizens/residents with Foray 48b here in Auckland New Zealand.

I'm sorry, but I have just realized that in my first email sent to you from my personal email address that I didn't explain that firstly, Foray 48b is in fact a chemical pesticide that no member of the public is allowed to know the full contents of as we are told that it is commercially sensitive and privileged information. Secondly, that it is being used to eradicate imported moths called the Painted Apple Moth and the Asian Gypsy Moth.

Apologies for not supplying you with all the information regarding what the spray was and why it is being aerially sprayed. Are you able to briefly acknowledge that you have received both this and my first email regarding this issue. Thank you kindly.

---

3. From Masry Vititoe to Alan Samuels  
Friday 23rd January 2004

Dear Mr Samuels

We are in receipt of your inquiry. However, Mr Masry has not had the chance to review it yet. Mr Masry reviews all inquiries submitted to the firm. Please allow 14 working days for the review process before contacting our office for status.

Thank you.

Donatella Zerial - Co-ordinator of New Case Investigations

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4. From Masry Vititoe to Alan Samuels  
Saturday 21<sup>st</sup> February 2004

Dear Mr Samuels

Mr Masry has reviewed the inquiry you supplied to our office, regretfully, we are not able to help you at this time.

Please be advised that we are not expressing any opinion as to the merits of your claim or the likelihood of prevailing on such a claim. Rather, our decision is based upon other considerations and we have determined that we cannot assume the responsibility of representing you at this time.

Please be advised that there are statute of limitations that apply depending on the cause of action and jurisdiction in which the case is filed. In order to preserve your rights to proceed on your potential claim, you must file a lawsuit within the applicable statute of limitations. If you fail to file within the appropriate time frame, you will forever be barred from pursuing your potential claim. We, therefore, urge you to immediately consult with other legal counsel of your choice to obtain their best opinion regarding the preservation of your legal rights.

Thank you for affording our firm the opportunity to review your inquiry. We are indeed sorry that we cannot assist you at this time.

Donatella Zerial - Co-ordinator of New Case Investigations.

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5. From Alan Samuels to Masry Vititoe  
Saturday 21<sup>st</sup> February 2004

Dear Mr Masry, Ms Brokovich & Ms Zerial,

Thank you for replying to my E mail regarding 'what we can do (within the law), to stop the aerial spraying of residents/citizens with the chemical pesticide Foray 48b'.

As I am somewhat unfamiliar with the Statutes of Limitation, your response means very little to me, as I am, what you would probably term an ordinary and simple man. I will however, take your response to others who are opposed to this abomination and who know more than me regarding legal issues and hopefully get some advice on what, now, needs to be done.

*Please treat this information with respect, and honour the privacy of everyone who has had the courage to participate*

I would be please to know and understand more fully from you, as to why I could be barred from taking legal action "forever". To me this does not make much sense. It is blatantly clear to me that the action of spraying people with chemicals without their permission is morally and ethically wrong. The only thing that I am endeavouring to do, is to find some compassion in the legal fraternity that sees that we have a case to put, because I, 'sure as hell' see there is.

Many people seem to think that there is nothing we can do. Well, I believe otherwise, hence my corresponding with you in the first place. Incidentally, the idea of contacting you was given to me by someone else a person who has been adversely affected by the spray. After having watched the movie Erin Brockovich a few times I began to see many similarities, so I believed contacting your firm, to be a good idea.

It doesn't take much to imagine what my feelings were on receiving your reply today. I will let you consider what they were.

I earnestly ask that you please, reconsider taking this on.

I realise that it would mean taking on huge US companies and some NZ Government departments.

If you are able to enlighten me more as to the 'other considerations' that you mention then perhaps I might get a better understanding as to why you are not prepared to take on the assumed responsibility that you refer to.

-----  
6. From Alan Samuels to Masry Vititoe  
February 2004

Dear Mr Masry, Ms Brokovich & Ms Zerial,

I have made contact with a Lawyer friend of mine here in New Zealand, who has given me a little more insight as to what probably needs to be done. It really does appear that our concerns need to be dealt with from this end, here in NZ i.e. taking the case, of Aerial Spraying citizens with Chemical Pesticides (in this case Foray 48b) to court.

I appreciated your getting back in touch with me so quickly regarding our initial request for help. I can now see that there would undoubtedly be some logistical problems regarding your firms' taking on our specific case. It is, therefore, with some reservation that I ask you to ignore the repeated call for help in my last E mail to you, requesting that you reconsider helping us with our plight. In hindsight I'm sorry, to have put this one on you.

If I could suggest, that where there are communities in the USA being sprayed with this same pesticide, that you please do all you can to help THEM to have the 'aerial spraying' stopped. I'm, sure that if anyone is able to do this it would be your Firm and the People that make up your Firm.  
God bless and thank you all, again.

Alan Samuels.

PS I'm not resigning myself, I'm just repositioning myself in order to get the aerial spraying of citizens with chemical pesticides stopped. The fight will continue, but I know we WILL eventually win.

*"The price good men pay for indifference to public affairs is to be ruled by evil men" – Plato.*

***End***  
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**Submission to People's Inquiry – 64****Hana Blackmore****Exposure: lived in hot spot spray zone of the White Spotted Tussock Moth****Oral testimony: Yes**

[Note: Written submission not completed. These are cover notes for the documents submitted to the Commissioners and introductory notes for oral testimony]

**Background**

I am a community worker and researcher, and I have been involved on a voluntary capacity in all the communities I have lived and worked in. This has included membership of a UK Local Authority *Community Council*, and an NHS *Community Health Council* where I also served on a *Health Authority Maternity Services Liaison Committee*, and their District Steering Group for the establishment of Well Women Clinics. I was the North West Regional Secretary and their National Committee Member of the *Association for Improvements in the Maternity Services*, and Lay Committee Member of the UK General Practitioner's *Association for Community-based Maternity Care*. I have also been a founding member of a community initiated *Health & Welfare Council* and *Disabled Action Group*.

My involvement with the current aerial spraying controversy dates back to the beginning of its first urban use in New Zealand in 1996/1997 against the White Spotted Tussock Moth in Auckland's Eastern Suburbs where I live. I am a founding member and current spokesperson for the *Society Targeting Overuse of Pesticides NZ (STOP)*, formed in 1997 in response to that aerial spraying campaign.

As evidence grew via the health reports the group was receiving of adverse effects of the spraying, I coordinated, compiled and submitted the health submissions from the community - liaising and meeting with our group with Public Health and MOF's operational team. Further aerial spraying in late 1997 did not go ahead and the moth was declared eradicated in 1999.

In June 2001 two years after the discovery of the Painted Apple Moth (PAM), I helped form the *Painted Apple Moth Community Coalition (CC-PAM)* to enable community involvement and participation in MAF's escalating - and probable aerial response - to the PAM eradication in West Auckland.

As STOP's representative I was invited by MAF in August 2001 to be a member of their *PAM Community Advisory Group (CAG)*. I submitted my name to the community, and was subsequently elected. CAG was disbanded by MAF at the end of 2002 when they formed a new MAF-selected *Community Liaison Group*. With the support of Waitakere Council the CAG continued to operate as the community-based and elected group.

The CAG re-introduced the Tussock Moth community-run health and incident reporting system when we became aware that the same problems experienced in the Tussock Moth campaign were occurring. I undertook the monitoring and recording of incidents, and in February 2003 issued the *Interim Report* of our community-based health & incident monitoring of the first year of aerial spraying. (1)

The formation of what was to become the *PAM Community Network* took place in 2003 when representatives of nine anti-spraying groups joined together to form a network of co-operation and co-ordination. After the rejection in November 2004 of what would be our final request for a government Public Inquiry or review into the aerial spraying, the idea of a holding our own people's Inquiry was put into action. The *People's Inquiry Inc* was formed by the PAM Community Network and I am currently the Steering Committee Convenor

**Introduction**

When I undertook to write the *Interim Report* of the spray-related effects of the PAM programme (1) it was an objective report on behalf of the community and the people who had entrusted their stories and

information to us. And whilst this submission is still about these people and the people I have worked with over the last ten years it is also my subjective experience and view.

My participation in both these eradication campaigns has been one of full, year round involvement. Apart from the health and incident monitoring and interaction with the community, I have also been part of a thorough and intensive research and alternative solutions endeavour undertaken by members of our groups. I have authored or co-authored a number of papers, reports and reviews to the government on many aspects of the eradication programmes. These range from timely warnings of problems with MAF's early approach to the PAM eradication, through spray drift studies to the last *Report to the Prime Minister* on the illegality of the aerial spraying and the Government's fraudulent compensation process. (2)

As a community we have gathered and accumulated an amazing amount of knowledge and information, and in the process received an education that for me has been painful, frustrating, even harrowing, but ultimately priceless.

I have been trying to write this submission for nearly a year now. Apart from trying to make time to do it, I have found myself overwhelmed by the sheer task of trying to put down on a few pages ten years of experience, observation and participation. Where do I start – or even finish? How can I ensure this story is told, that situation detailed, this evidence produced? How do I put *everything* into a few words so that nothing is missed - that it is all documented, not forgotten and capable of being followed up by others?

The answer of course, is that I can't.

So I have chosen several 'themes' that will I hope cover the areas of greatest concern to me, and the areas that need strong recommendations for future change.

1. Monitoring, surveillance, research and cluster investigations.
2. Community participation in decision making.
3. Compensation.
4. Public Health role.
5. Ethics, human rights and the "right to know"

-----  
**IMPORTANT: the following are cover notes. They are not complete, comprehensive or in order.**  
 .....

## **MAIN RECOMMENDATION**

As a result of involvement in these two very intensive eradication programmes, it is my opinion that the aerial spraying of *any* urban area and human population is not only unsafe but ethically, legally and morally wrong.

## **SECONDARY RECOMMENDATIONS**

- 1. Monitoring, surveillance, research and cluster investigations.**
- 2. Community participation in decision making.** To include the setting up of forums to conduct a thorough post-mortem of both the Tussock Moth and Painted Apple Moth campaigns with a view to setting in place not only recommendations for the conduct of future programmes that directly impact the community, but the formation of suitable vehicles to implement this.
- 3. Compensation.** (a) The implementation of the recommendation in the Network Report of 2004 to "set up an independent body to review, mediate and settle all compensation claims arising from the PAM programme," (b) the amend the compensation rules of the biosecurity act to include all such future claims as legitimate.

**4. Public Health role.****5. Ethics, human rights and the “right to know”****1. Monitoring, surveillance, research and cluster investigations.**

Nowhere in the world has any population been exposed to this particular pesticide to the extent and duration of these programmes. As a result, the use of research (or lack of research) from overseas where no urban population has been aerially sprayed with this pesticide more than four times in one programme, should not have been used to vindicate and 'clear' the programmes here.

In addition, caution should have played a central part in ensuring that all necessary and relevant surveillance and exposure studies should have been set up *before* any aerial programme started. They did not because of lack of government funding for the Tussock Moth programme, and for the PAM because there were no studies that showed there were adverse outcomes to spraying this pesticide, and the population to be sprayed was too small.

The very lack of these studies has ensured that the adverse health effects experienced in West Auckland in the very *large* population actually sprayed and detailed in our *Interim Report*, and elsewhere, are 'unverifiable'. For instance - the refusal of MAF and Public Health to carry out any practical spray drift, penetration and persistence studies before and during the PAM spray programme has ensured that adverse effects can be, and were, dismissed because exposure cannot be practically confirmed.

MAF in reply to my call that urgent studies be set up before spraying commenced said that

*"..It would be difficult for us to justify spending substantial government funds in this area when we are being told by the health experts we have commissioned to undertake the health review, along with health officials, that there are no health implications to the community from using this spray"*

But their dismissal of health implications are based on studies both here and overseas which may well have been fatally flawed because they assume an unsprayed control group. Evidence that we were presenting to MAF at that time was of Canadian research that *did* measure drift, penetration and persistence that showed comprehensively that these assumptions were wrong. MAF ignored those results then, as they continue to do now.

**i. Monitoring**

- Always retrospective – never prospective.
- Community understood monitoring would be undertaken during the spray so that if adverse health events began to show up, spraying could be halted.
- Health monitoring strategy not even developed and published until 2004 *after* the end of spraying.
- No account taken of exposure at work. Only home address. That decision shown to be fatally flawed in the Hamilton OSH incident where a very high number of teachers at a school were dismissed as having spray effects because their home address was outside the spray zone.
- No account has been taken of *any* pre-aerial exposure to ground spraying with Chlorpyrifos and Decis.

**ii. Surveillance****iii Research & cluster investigations****2. Community participation in decision making - community Involvement**

No community participation or input into any vital component of the spray programme, in particular:

- Health surveillance programme post Tussock Moth.



*Please treat this information with respect, and honour the privacy of everyone who has had the courage to participate*

- Health risk assessments
- Setting up of the monitoring and surveillance strategies.
- Early eradication programme (no CAG).
- Ongoing participation in technical and science groups.

### **3. Compensation**

#### **4. Public Health Role**

Not doing their job of protecting the people. They cleared the spray for MAF. Who is on the side of the public and taking care of their interests? They were on MAF's side, supporting MAF. Public Health were saying that the moth could destroy the country – got to eradicate it. That's not their job. How could MOH investigate any health complaints when they had sanctioned the spray as safe? MAF doctors defending the spray as important. The HRA had 9 pages on how dangerous the moth was to humans.

How could the MAF appointed Medical Service (AerAqua) admit anyone's health was being affected by the PAM spraying when *they* were the authors of the surveillance report that said there had been no adverse effects from the Tussock Moth spray – and *that* report had been the basis of the “clean bill of health” given in the Public Health authored HRA?

Whichever way the people looked for support and help they found the foxes guarding the chicken coop. Letters of complaint to the Minister of Health were automatically forwarded to MAF to answer. Complaints to Public Health were referred to AerAqua. (What they did when the complaint was about AerAqua has never been clear). GPs were told to refer their patients to AerAqua if there were concerns. The Patients returned to their GPs saying they had been told “it was all in their heads” or it was “their age”, or “the spray was perfectly safe”. How all this could be determined without any medical examination is difficult to comprehend.

Even when GPs persisted and patients were referred to the MAF recommended specialists, diagnosis in favour of the patient as being spray-affected has been overturned by AerAqua after the specialist has been “re-educated” about how the patient wasn't in the spray zone or how safe the spray was. How specialists can allow their professional opinions to be so easily dismissed is beyond me. But maybe the fact that one of the country's leading Clinical Immunologists was listed by the Ministry of Health in a 2003 document as a “critic” of the spray programme is hopeful. (This doctor is on the record as telling AerAqua there is *no* reliable test for the spray).

The Canadian research on drift studies was missing from the PAM HRA until our researchers pointed it out. By this time the spray programme had already been given the “all clear”. The updated HRA was finally published two months *after* the start of spraying.

One result of Public Health dismissing drift significance is that over and over again people were told that only *direct* contact with the spray constituted exposure. Claims of adverse health effects were rejected because the ‘patient’ was not in the spray zone.

No consideration was given to the fact that people were living and sleeping in this stuff ... that there may have been build up in the houses that was being constantly breathed in. Chronic exposure such as this never been studied.

### **5. Ethics, human rights and the “right to know” .....**

**Note: submission to be completed**

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**Submission to People's Inquiry – 65****Exposure: N/A****Simon Hales****Oral testimony: Yes****Statement of evidence**

I am medically qualified and also have a PhD in epidemiology. I have 15 years experience of public health research, specialising in the field of atmospheric environment, including climatic and air pollution effects. For the past 10 years, I have worked as a researcher at Wellington School of Medicine, mostly full time, but with some periods of related research work elsewhere.

I have acted as an adviser to international, national and local agencies -- including the World Health Organisation, World Bank, New Zealand Ministry for the Environment, New Zealand Ministry of Transport, and Environment Canterbury. I served as an NGO representative on the MfE organochlorines consultative group.

In 2004, I was the lead author of a report to the New Zealand Ministry of Health (Hales et al, 2004) which raised the following concerns

1. Aerial spraying of Foray 48B produces fine particles of biological matter (bioaerosols) that may be inhaled.
2. Many of the symptoms, which members of the community attributed to exposure to the spray, are consistent with the well established short term irritant effects of bioaerosols.
3. The level of human exposure caused by aerial spraying of Foray 48B is not well known and has not been measured in New Zealand.
4. By analogy with exposure to bioaerosols in the workplace, insecticides based on bacteria or bacterial products could cause chronic health effects, especially respiratory diseases.
5. The dose response relationships for these chronic health effects are not well known.
6. Studies of exposed workers and communities up to the end of 2004 have not shown serious health effects, BUT these studies have methodological weaknesses.
7. Studies of workers and human cells in the laboratory have shown that the active ingredients of Foray 48B have measurable physiological effects, particularly on the immune system.
8. The ERMA approval of a closely related biological insecticide was based, in part, on incorrect assumptions.
9. Several epidemiological studies were recommended

The MoH contracted ESR, a Crown Research Institute, to analyse hospital discharge data, which was one of the studies recommended by WSM as described above. I subsequently became (reluctantly!) involved in that study when subsequently working for ESR. This ESR study concluded, among other findings, that there were increases in asthma hospital visits that could plausibly be related to the aerial spray operations (Gallagher et al, 2005).

We subsequently analysed childhood asthma hospital admissions for the whole of New Zealand, July 1999 – December 2004 using a spatial scan statistic (Hales et al, 2005). We found spatial clustering of asthma admissions in many New Zealand cities, and spatiotemporal clustering in a few cities. We considered that many of the purely spatial clusters might be explained by characteristics of the local population or health services. This explanation is less plausible in the case of the observed space-time clusters of asthma admissions, which we considered more likely to be related to local exposures.

In spatiotemporal (space-time) models, there were significant clusters in Auckland, Palmerston North, Lower Hutt, Christchurch and Invercargill. Two of the four Auckland clusters overlap biological insecticide spray zones, and two do not; the majority of the observed spatiotemporal clusters are unrelated to aerial spraying of biological insecticides in space and time.

The results do not prove that the spray caused the observed spatiotemporal clusters, but it is plausible that air pollution, including fine particles of biological and non-biological origin, might play a role. Further research is underway in an attempt to clarify whether or not the aerial spraying has a role in the Auckland asthma clusters.

It is my view that the Auckland community potentially exposed to aerial spraying of Foray 48B should be the subject of further, detailed, long term epidemiological studies. Unless and until results of such studies confirm the safety of the spray, no further aerial spraying of biological insecticides should be carried out over populated areas (Hales, 2004).

Hales et al, (2004) WSM report - (Attachment A)  
Hales, (2004) EcoHealth paper - (Attachment B)  
Gallagher et al, (2005) ESR report - (Attachment C)  
Hales et al, (2005) SIRC paper - (Attachment D)

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Simon Hales  
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Dept. Public Health  
Wellington School of Medicine  
PO BOX 7343  
Wellington  
New Zealand

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**Attachment A**

**Assessment of the potential health impacts  
of the 'Painted Apple Moth' aerial  
spraying programme, Auckland  
for the New Zealand Ministry of Health**

Simon Hales<sup>1</sup>  
Virginia Baker<sup>2</sup>  
Kevin Dew<sup>1</sup>  
Losa Moata'ane<sup>1</sup>  
Jennifer Martin<sup>1</sup>  
Tim Rochford<sup>1</sup>  
David Slaney<sup>1</sup>  
Alistair Woodward<sup>3</sup>

1. Public Health Consultancy, Wellington School of Medicine and Health Sciences
2. ESR Health, Kenepuru
3. School of Population Health, University of Auckland

February 2004

[http://www.moh.govt.nz/moh.nsf/0/F9BDFEA13787E57DCC256DA2001951F9/\\$File/PAMreport\\_final.pdf](http://www.moh.govt.nz/moh.nsf/0/F9BDFEA13787E57DCC256DA2001951F9/$File/PAMreport_final.pdf)

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**Attachment B**

EcoHealth  
© EcoHealth Journal Consortium 2004  
10.1007/s10393-004-0102-x

*Short Communications*

## **Precautionary Health Risk Assessment: Case Study of Biological Insecticides**

Simon Hales <sup>1</sup>

*(1) National Centre for Epidemiology and Population Health, Australian National University, Eggleston Road, Canberra, Australian Capital Territory, 0200, Australia*

**Abstract:** In conventional risk assessment approaches, experts define the scientific questions that can legitimately be asked and the burden of proof is on the potentially exposed community to show that a proposal is unsafe. Here I propose an alternative approach, precautionary health risk assessment, in which the scientific questions to be addressed are defined by community consultation. I illustrate the approach with a case study of exposure to biological insecticides. This illustrates how community consultation can have a critical influence on the outcome of a health risk assessment. Government agencies may be reluctant to involve stakeholders in health risk assessments because this involves a loss of political control of the process. However, precautionary approaches are likely to lead to better health outcomes where decision stakes and scientific uncertainty are both high.

Key words: precautionary principle, risk assessment, bioaerosol exposure, *Bacillus thuringiensis*

<http://www.springerlink.com/content/mcrmqfphynqblcx9/fulltext.pdf>

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**Attachment C**

**DESCRIPTIVE STUDY OF HOSPITAL  
DISCHARGES FOR RESPIRATORY  
DISEASES IN SPRAY ZONE FOR  
PAINTED APPLE MOTH (AUCKLAND),  
RELATIVE TO LOCAL AND NATIONAL  
STATISTICS 1999-2004**

Prepared as part of a Ministry of Health  
contract for scientific services

29 September 2005

by  
Lou Gallagher PhD  
Ruth Pirie  
Simon Hales PhD

**1 SUMMARY**

Aerial application of Foray 48B was conducted over Auckland suburbs from January 2002 to May 2004 to eradicate the exotic pest, the Painted Apple Moth.

A report commissioned by the Ministry of Health in February 2004 recommended that "...further epidemiological studies are carried out, with sufficient statistical power to provide adequate reassurance to exposed communities in the event that no health effects are found."

The present study compared the age-adjusted and sex-adjusted hospitalisation rates for respiratory diseases for all of New Zealand with equivalent rates for the population living within the spray zone, from January 1998 to May 2004.

In the New Zealand population, monthly hospitalisation rates remained steady with a slightly lower-than-usual winter peak in 2000. In the exposed population, there was an increase in hospitalisations beginning in 2001 (one year before spraying began), continuing into 2004.

We compared hospitalisation rates before (1998-2001) and during (2002-mid 2004) the spray programme. There was no difference between before-spray and during-spray monthly discharge rates for influenza/pneumonia, but asthma discharge rates doubled over the period 2002-mid 2004 for boys aged 0 to 4 years old in the exposed population. Similar but less dramatic increases were observed for girls aged 0 to 4 and 5 to 14 (50% and 80% increases, respectively). Overall, the age-adjusted and sex-adjusted monthly hospital discharge rate for asthma conditions increased by 40% between the two time periods (before and during spray-time) for the spray population and decreased 11% for the national population.

The underlying trend in hospital discharges for respiratory diseases and asthma in the spray zone was evident before spraying began and cannot therefore be attributed to this exposure. However, there are several findings pointing to a real increase in asthma discharges that could plausibly be associated with the spray programme.

Comparing the year 2001 with 2004, there was an increase in asthma admissions in residents inside the spray zone, but a decrease in asthma admissions in residents just outside the spray zone. These trends were statistically significant. In sub analyses by



ethnicity, the largest increase appeared in the non European exposed group.

Compared to the three-day period just prior to spraying, spray days and the period of three days after spray days showed slightly higher rates of respiratory and asthma admission within the spray zone. Slightly lower rates of asthma admission than during the pre-spray period were observed outside the spray zone. These differences were not statistically significant.

Chance, bias and confounding are possible alternative explanations for the results and we stress that these results do not prove that the observed patterns of respiratory hospital discharges were caused by exposure to the spray.

[http://www.moh.govt.nz/moh.nsf/0/EDC2D77F43DB9C33CC2570B30003B4E8/\\$File/painted-apple-moth-hospital-discharges.pdf](http://www.moh.govt.nz/moh.nsf/0/EDC2D77F43DB9C33CC2570B30003B4E8/$File/painted-apple-moth-hospital-discharges.pdf)

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## **Attachment D**

### **Clustering of childhood asthma hospital admissions in New Zealand, 1999-2004**

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**Presented at SIRC 2005 – The 17<sup>th</sup> Annual Colloquium of the Spatial Information Research Centre  
University of Otago, Dunedin, New Zealand  
November 24<sup>th</sup>-25<sup>th</sup> 2005**

## **ABSTRACT**

The context for this study is public concern about aerial spraying of biological insecticides over Auckland, New Zealand between January 2002 and May 2004. We analysed childhood asthma hospital admissions for the whole of New Zealand, July 1999 – December 2004 using a spatial scan statistic. We found spatial clustering of asthma admissions in many New Zealand cities, and spatiotemporal clustering in a few cities. We hypothesize that many of the purely spatial clusters might be explained by characteristics of the local population or health services.

This explanation is less plausible in the case of the observed space-time clusters of asthma admissions, which we consider more likely to be related to local exposures. In spatiotemporal models, there were significant clusters in Auckland, Palmerston North, Lower Hutt, Christchurch and Invercargill. Two of the four Auckland clusters overlap biological insecticide spray zones, and two do not; the majority of the observed spatiotemporal clusters are unrelated to aerial spraying of biological insecticides in space and time. While the present results do not allow us to identify which local exposures are most relevant in explaining the observed spatiotemporal clusters, we hypothesize that air pollution, including fine particles of biological and non-biological origin, might play a role.

**Keywords and phrases:** asthma, bioaerosol, spatiotemporal clustering, Satscan, *Bacillus thuringiensis*

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***End***

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**Submission to People's Inquiry – 66****Exposure: lived in spray zone****Oral testimony: No**

This lady's prime concern was for the health effects of the spray. She did not want to make a submission but wanted it to be known that she believed there are advanced and safer methods to eradicate pests and that studying them is important.

She wanted to recommend that there should be research for advanced, safer methods for humans – using humans.

***End***  
-----**Submission to People's Inquiry – 67****Exposure: lived in Tussock Moth spray zone****Oral testimony: Yes****[Submission incomplete - no reply to emails]*****End***  
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**Submission to People's Inquiry – 68****Exposure: lived in Tussock Moth spray zone (hot spot)****Ann Pratt****Oral testimony: No****TO WHOM IT MAY CONCERN**

This is my story as a result of the Aerial Spray in my area of Orakei, commencing October 1996. The first day of spraying, a Saturday I remember well. We had secured our house and I was in the bed reading the Saturday "Herald" when the first of many times a plane swooped over our house, so close I could see the rivets on the plane. As our garden is somewhat heavy on the vegetation side, I guess we got a good dousing.

Coincidentally at this time, my cat had been diagnosed with an enlarged heart and had started to spend a lot of time in our garden seeking some sort of solitude. I, being so distressed at his declining health, decided to work off my stress by getting "stuck into" some vigorous cleaning up in the garden also allowing him to feel I was watching over him. I therefore must have picked up a huge amount of spray residue (I don't garden with gloves) and probably absorbed a lot through the skin and even ingested some when I went inside to drink water or grab something to eat.

The result of these gardening episodes left me with, firstly a very inflamed left eye which I distinctly remember was a source of embarrassment and great discomfort to me on the 3rd November when I tried to celebrate my birthday with some friends. The next downturn in my health was a respiratory one which by the time December came around was causing heart attack type pain and difficulty in the oesophagus area. After one instance driving in my car when I could hardly breathe I was scared enough to visit my G.P. who knows me well and knows that hypochondria is not something I'm known for.

He could not quite figure out what was wrong so sent me to a number of specialists for tests. Ear, Nose and Throat. Oesophageal, and Cardiology people. I came up negative in all cases, but to each expert I passed the comment that I thought perhaps it was as a result of the aerial spraying as I had never had anything like this before. In fact, I went from a healthy happy person to a very unhealthy feeling and depressed person. By this time, I had discovered some articles in local press advertising meetings for victims of this spraying. I attended and heard a lot of horror stories. I joined the group and volunteered my input.

I was horrified to receive a phone call one day from a person asking questions which I suddenly realized were asked in such a way that I gathered that I as a "victim" was being told to shut up and get on with life as there was no proof that BTK was harmful and all of us were just imagining it!

I have moved on in my life, realizing that getting angry about my decline in health only caused me more anguish. I KNOW the spray caused my ill health, and I'm pretty sure it didn't help my beloved cat's cause either. An enlarged heart squeezes the lungs and causes respiratory problems - what chance did he have to survive with this type of pollution?

I am submitting this so that perhaps it will assist in the prevention of any future spraying and therefore anyone else losing their good health as I did.

Footnote : Since my decreased health situation, I have been diagnosed with Epstein Barr Virus (the symptoms of which I left untreated putting it all down to the Spray aftermath)...This virus has left me with Chronic Musculoskeletal Pain (as diagnosed by Dr. Mike Butler, Rheumatologist) which is a frequent progression of Epstein Barr Virus. This Virus attacks people with a lowered immune system with which I was undoubtedly left post Spraying!!! I can honestly say in all truth that I am a person of much diminished health, and this was a person who NEVER got Influenza when everyone else around did!

**End**  

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**Submission to People's Inquiry – 69****Exposure: lived in spray zone – Tussock Moth****Rodney Entwisle****Oral testimony: No**

This submission is a letter written to the Convenor of the People's Inquiry by the wife detailing her husband's experience with the effects of the Tussock Moth spraying in the Eastern Suburbs of Auckland in 1996-97. This has been updated for submission to the Inquiry.

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**July 2005**

I was given your email address by the Sunday programme after I contacted them about their "Safe or Sorry" programme about the MAF aerial spraying programme over Auckland.

As I'm sure you're aware, the spray they mentioned in the article is the same as the spray used for the Auckland Tussock Moth campaign some years ago.

My husband was hospitalised every single day they sprayed for tussock moth. His condition deteriorated to the point where he had to leave Auckland altogether in order to live. Even so, his condition was that bad that even though he had moved, he ended up having a massive asthma attack and was pronounced dead on the operating table after 14 minutes of attempting to resuscitate him. By some miracle, he came back. He spent several years bedridden because of that attack and the multitude of attacks caused by the spray in the months preceding. Even now, he has continuing problems as a result, and can no longer work because his condition is so bad. I spend most of my time caring for him because most days he remains bedridden.

The first day of spraying was his first day at his new job - his dream job, which he'd spent many years working up to - as Head Animator for Disney. Because of his health, he ended up losing his job before he even started, and people in the industry are not interested in hiring someone, even for part time work from home, who is prone to 'health issues'. His whole career, and indeed life, has essentially gone down the gurgler because of this. Because of the timing, he doesn't get ACC - it being the first day of work, and his not actually being able to arrive to sign the employment contract, he didn't have the benefit of getting 80% of what would have been his weekly wage. Instead, we're barely surviving on the invalids benefit.

When my husband contacted MAF to raise a complaint, they refused to take his calls, never responded to messages, and never acknowledged that he'd ever tried to get in contact. Thus, when it came time to use the same spray for the Painted Apple Moth, they could say that they had no records of anyone raising any concerns. Of course there were no records. They never acknowledged any of the complaints!

The nurses in Middlemore Hospital at the time told my husband that they had on average 12 extra emergency asthma cases (compared to normal) on every day the spray was used.

I proposed to the Sunday programme that if he is so sure this spray is so safe, Jim Sutton should volunteer to have himself and his family sprayed once every ten days for six months - just to prove how safe it really is. If he refuses the challenge, the only words that come to mind are "gutless worm" and "chicken hawk" - for he would be acknowledging that the spray DOES cause harm, but he refuses to harm himself or his family, but is willing to harm, and potentially kill, others... because it doesn't directly hurt him.

We have tried to find contact details in the past to talk with people who are fighting to have this spray permanently removed from the way MAF is using it, but have had no real luck until now... simply miss too many details when anything comes on about this topic.

We are scared to live in New Zealand if MAF insists on using this spray where we may end up living. Another spraying ordeal like he's already been through WILL mean the death of my husband, and I personally would rather have him remain with us so that our son has a good role model and wonderful father

for as long as possible, not to mention my losing an incredibly wonderful and loving partner.

Currently, we are forced to live in Whangarei (where the humidity is constantly so high that it further worsens my husbands condition) because we don't know if they'll suddenly decide to start spraying either Auckland or Hamilton again. Wellington, we figure, won't be sprayed (politicians don't like spraying themselves!) however, since his health is so bad, neither one of us can work normally, and funds are tight... not a good situation with a place that isn't cheap to live in: Our ideal living area would be the Waikato, particularly not too far from Hamilton - we were within two months of leaving to live in Hamilton when they announced they would be spraying there as well... which put paid to that <sigh> After some experiences with dry areas, we have found that a dry climate helps my husbands health incredibly, and given enough time in a dry enough climate, we're sure he'll be able to go back to the workforce, albeit in a limited capacity. However, as long as the spraying remains a risk in those areas, we can't risk moving there.

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### **Update March 2006**

Unfortunately, my husbands health has not been good in the last week. We went down to Auckland to do some special things for my husbands birthday and he ended up having quite a bad attack because of the conditions at the motel: We've had to increase his dosage of medication in the hopes that he'll stabilise again, but he's been struggling for the last week, and been up and down so far since late last year. Not bad enough to require hospitalisation, thank heavens, but enough to be wary!

We haven't moved yet, we're in a different house (needed to move in order to get a fenced property) - far safer for our son than a property he couldn't be allowed outside except under **\*very\*** close supervision! Free roam of the yard is necessary, IMO, in order to learn a bit of independence and confidence. Until we've paid off debts, we're not really able to move.

Thanks for the email, it's very much appreciated.

***End***

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**Submission to People's Inquiry – 70****Exposure: lived in spray zone****Tracey Mackay****Oral testimony: No**

Written testimony is in two parts. A covering submission written March 2006, and an accompanying document that gives the fuller background details written in May 2004 just before cessation of aerial spraying.

**March 2006****To Whom It May Concern**

Our son Simon suffers from asthma, he also has food allergies. Before aerial spraying for the painted apple moth began we felt we had his asthma and allergies under control and manageable. The reactions suffered by Simon when sprayed with Foray 48B or present in a spray zone after recent application are: nausea, swollen eyes, exacerbation of chronic rhinitis, exacerbation of asthma resulting in the need for constant nebulisers and an admission to intensive care, weight loss, coughing till he vomited every day for 8 weeks, coughing so hard he popped the blood vessels in his eyes, and constant use of steroids to keep his asthma under control. However for about six months no-one believed that Foray 48B made us sick.

The rest of our family also suffered adverse health effects. My mother has a soy allergy and my father asthma. I have asthma and my husband developed depression and diabetes. Our two other children also have asthma that is usually very mild. During the spray period we all became ill with extreme fatigue, asthma, headaches, sinus problems, nose bleeds, and conjunctivitis type eye inflammations. My husband was so concerned at the ill health of Simon and his family, he developed depression and diabetes.

We also had problems with Simon's medication to help with the sinus and asthma problems as it acted as a dis-inhibitor and this had a negative effect on his behaviour. He also had a significant amount of time off school during the spray period. We worry this may hinder his ability to participate as a contributing member of society in the future.

The effect on this spray programme has been devastating for our family. My husband and I have had to deal with the stress of having a very sick child when no-one would believe us for a long time that he was sick. We had to co-ordinate work, doctors visits, someone home to look after sick children, specialists visits, evacuation for (eventually 3 days) every month when they sprayed and disruption to sport, work and family life. Financial losses have occurred due to extended time off work, doctors and specialist visits, different medication, the purchase of dust mite covers for Simon's bed, a dehumidifier then a domestic ventilation system for our house and a dryer for Simon's bedding. All these things were recommended by various health professionals to help improve his health.

After each spray cycle we had to wash the car before Simon could drive in it – if he opened the car door then touched his face he would swell. We would also have to wash the house and trampoline before he could come home and use them. Any residue left on the local playground or in the plant shop meant Simon would have to wait in the car or we would have to go home.

Each spray cycle meant we would have to leave our home before dawn, often in a taxi, and spend between 1 and 3 days somewhere else, doing nothing except kill time with three children in tow. Aer Aqua would provide a video player and we would watch videos I hired from my local video shop. I became so stressed that every time the nurse telephoned to let me know the date, time and venue of the next spray cycle I would cry.

The cost of Simon's medication for tablets to keep his asthma under control is now \$121.88 per month. This is partly subsidized by a child disability allowance paid by WINZ. However in the beginning we had to pay for it ourselves, then Aer Aqua began to subsidize the costs. This medication works well, however I am concerned about the long term effects of him using this steroid.

When I look back on these times now I do not know how we all got through them, just writing this is bringing tears to my eyes. They seem like very dark days indeed. I can still hear my boys struggling to breathe in the night; see their bleeding noses and hear them crying with fatigue. I can see my parents ill with eye problems, asthma and fatigue and my husband almost unable to function, exhausted, frozen and depressed.

We were told by the Aer Aqua doctors that these illnesses were in our minds, and it all would have happened to our family anyway. I don't think so.

All we ask is fairness, and the truth.

Kind regards

Tracey and family

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### **Background – written May 2004**

My immediate family live in McLaren Park Henderson. We are 1.1 kilometres from the reduced spray zone at Waikumete Cemetery. My extended family live in Ranui, on the other side of Henderson, between two spray zones, Swanson and Riverside. We are asthmatic and have pre-existing allergies. We believe our family health has been directly affected by the aerial spray programme for the painted apple moth. We have never seen a Painted Apple moth near our house, or near my parents house, however the kids have seen one on a school bush walk (with a park ranger) on the outer edge of the spray zone.

In 2002 our youngest son, Simon, started getting sick constantly, we had thirty six (36) visits in thirty six (36) weeks to our GP at the Union Health Clinic. We had no Community Card and, thankfully, the Doctors often saw us for free. We also had quite a few visits to the White Cross emergency department, which is not free. Simon was on a nebuliser often, as well as steroids, and began to have persistent asthma symptoms that became more difficult to control. My health had also deteriorated and I needed nebulisers and steroids as well. The two older boys began having blood noses, sinus infections and asthma, and my husband had sinus problems, odd skin rashes on his arms, itchy eyes and sores on his scalp. He was a truck driver working out of the Waitakere Baling Station, often getting caught in spray putting nets up on the back of his truck.

Simon however, appeared to be always very sick. We questioned whether aerial spraying could be making us sick and were told only a 'few lefty loonies were getting worked up' over it. Simon began to cough until he vomited daily during June, July and August 02. He coughed so much after a nebuliser in June 02 he blew the blood vessels in his eyes. I asked for a referral to ophthalmology at Auckland Hospital to make sure no damage had been done to his eyes as they were full of blood. He was so fatigued I was picking him up from school early. I asked for a referral from my GP because I was not happy with Simon's health.

In August 2002 I met with a paediatrician at Westkids, Waitakere Hospital. Dr Stewart was confident that continuing with the treatment my GP had prescribed and purchasing dustmite covers for the beds would solve our problems. Various health professionals also made suggestions on how to help our family improve our health which we followed up on. The purchase of a dryer to put bedding through to kill any dustmites, a dehumidifier to make sure the house wasn't damp and a dishwasher to make sure no cross-contamination of peanut butter was making Simon ill. The Salvation Army in Henderson also took the two older boys to Camp Mahurangi for a week to help the family cope. Simon was still sick so in July I asked for a second referral and was sent to Starship. They sent me home saying my son had a virus and he would get better soon. I was dissatisfied with this and asked for a third referral to a specialist paediatrician. In November 2002 I was referred to Dr Ameratunga.

During this time I had been speaking to Aer Aqua, the medical personnel contracted to MAF. In November 2002 they agreed to move us all out on spraydays to Hobsonville. Our health suddenly made a significant improvement. I joined Asthma Auckland and in January 2003 all three boys went to Snells Beach for a week at Asthma Camp. In March 2003 we went to see Dr Rohan Ameratunga. It was private referral, however he made the decision to bill Aer Aqua for the consultation and the two follow-up consultations. He also sent us for patch testing and RAST testing. He confirmed my belief that the health symptoms we were experiencing

were spray related. The spray aggravated existing allergies we all had, and the medication Simon was currently on was responsible for the unusual anti-social behaviour he had been displaying at home and school. He changed the medication and the behaviour changed. I asked Aer Aqua to pay for the Epi-pen that Simon now required and they agreed, and we also purchased a Medic Alert bracelet. When Hobsonville began to be sprayed, we were evacuated to Parnell our health improved again.

My parents had also been ill with sinus problems and conjunctivitis - my mother has a soy allergy - and her health deteriorated markedly over 2003. I suggested she contact Aer Aqua and they began to evacuate her as well. The spray zone was reduced and we stayed at home as they were not actively spraying over our house. Simon, although a lot better, was still frail. Whenever he had a setback it would hit him hard, his face would swell for unknown reasons and his eyes would become bloodshot, the asthma would start later. We believe this was from sticky spray residue left on cars and in the garden.

In June 2003 Mum and Dad took the children to their home in Ranui nine (9) days after a spray and they played in the garden. That night Simon's asthma suddenly became uncontrollable and we went to White Cross Emergency twice and from there by ambulance to Starship. We were admitted to Paediatric Intensive Care Unit and stayed on a ward in Starship for 5 days. It was very scary thinking our son may die, and there was nothing we could do. My husband had to cope stuck at home not knowing if he would see his child again and I believe the stress from this triggered the depression and high blood pressure he now is medicated for. Simon was discharged with a prescription for Singulair to keep his asthma under control. I wrote to Aer Aqua asking for help with costs of \$138.00 for 28 days supply, they agreed to pay for his medication for the duration of the spray programme.

Towards the end of 2003 the family appeared to be getting more reactive to residual spray around the place, even though we were moved out on the spray day. This resulted in ambulance trips to Starship, for Simon, with asthma. The asthma would settle down after a nebuliser. As a result of this I asked Aer Aqua to be moved out and we began to go to motels for 3 days at a time from Christmas 2003 till recently for the spot sprays. The aeroplanes fly over our house, not spraying, but turning around to spray the cemetery at Waikumete. Aer Aqua tell me no spray could fall on my house, however I am not willing to risk my son's health.

Just before Christmas they also began to pay us a food allowance so we could purchase a meal from the motel each day we were there. At the end of the Waikumete Cemetery aerial spray programme Aer Aqua stopped paying for Simon's Singulair. They supported my application to WINZ for help with the costs, however Winz refused so we covered this cost with food money for two months. On a second application to WINZ they have agreed to pay as we earn a lot less than they thought we did. However we cannot earn more money or the payments will stop. Simon and I also saw an Aer Aqua doctor to make sure we had no on going health issues arising from the spray programme.

[MAF] Doctor [...] told me all the health issues our family have had would have happened anyway – Another MAF Doctor also told my mother the same thing. I dispute this as I believe the severity and the frequency of our illnesses have been worse since the spray programme. During the last school holidays Swanson was aerial sprayed, they finished at around 8 - 9 am, we stayed in Te Atatu North until 2pm before we came home. That night Simon needed 10 puffs of Ventolin twice before his asthma settled down. They are spraying again next Tuesday and I have my fingers crossed that no residue comes near us.

I think the major detriment we have suffered is our overall health and wellbeing. We do not get sick within the 24 hour window after exposure to the spray that Aer Aqua go by, always 3 - 5 days after - it took a health diary over 4 months to convince them enough to evacuate us. Once Aer Aqua accepted Simon was made ill by the spray programme they managed our situation by helping us avoid exposure to the spray, and towards the end the residue as well. However, I have no sick leave left at work - I am lucky to still have a job really, my GP thought I was 'psycho mum' asking for referrals all the time, I saw 3 specialists, only one listened to what I was saying. I feel like I have been banging my head against a wall for 18 months. My parents live in Ranui and they have been sick as well as my kids, my husband and myself.

*Please treat this information with respect, and honour the privacy of everyone who has had the courage to participate*

We are aware of the implications of not controlling this insect pest, and the damage it may cause our Waitakere Ranges and other bush areas. We are also aware of the forestry implications in places like Woodhill. If MAF want to get rid of this pest - border control in the beginning is the only way. There is no point in closing the stable door after the gypsy moth, the southern saltmarsh mosquito, the painted apple moth, the fire ants, the Argentinian ant etc are in residence here. The Government needs to adequately fund MAF to do what is in it's job description.

***End***

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