EXHIBIT #148

G. K. Chambers Consulting Inc.
Consulting Clinical Epidemiology
GKChamber@Yahoo.com

Mail Address: 4550 Bellevue Dr.
Vancouver, BC
V6R 1E5

May 4, 2009

Braidwood Commissions of Inquiry
980-1500 West Georgia Street
Vancouver, B.C.
V6G 2Z6

Re: Circumstances Surrounding the Death of Robert Dziekanski on October 14, 2007

Dear Sirs:

I am sending you as requested my written opinion on issues of causation surrounding the death of Mr. Robert Dziekanski. This opinion is given after a review of a variety of sources. These include a review of various written material, presentations and published studies including material from Phase I of the Braidwood Inquiry. It is also based on a review of the DVD taken at YVR during the minutes prior and up to the death of Mr. Dziekanski as well as results from the autopsy report. Findings from the autopsy report and their relative importance were reviewed in meetings with the forensic pathologist Dr. C. Lee and with the cardiologist Dr. C. Kerr.

My CV, with both my clinical and academic professional qualifications to give this opinion is attached.

My understanding of the events prior to the death of Mr. Dziekanski is that he was originally cleared after medical examination to come to Canada in May of 2007. The Citizenship and Immigration Canada Medical report completed by a Dr. Skotnicki, at that time, indicated that Mr. Dziekanski was healthy and without any significant medical, psychiatric or drug and alcohol problems. Examination of his heart, blood pressure and abdomen was unremarkable. The doctor at that time answered "no" to the question "Do you feel this applicant is at increased risk for developing Alcohol-Related Problems" or evidence of alcohol "abuse". The interview with Dr. Jablonska supports the notion that prior to his trip, Mr. Dziekanski was healthy, behaved normally and was without mental illness, an enlarged liver or other signs of alcoholism. His electrocardiogram was normal with no evidence of an arrhythmia or enlargement of the ventricles. He was in normal sinus rhythm with a borderline tachycardia. For this he was given one month of "miniscule" or low dose of metaprolol (25mg. twice a day).

Mr. Dziekanski left Katowice, Poland and flew via Frankfurt to Vancouver on flights LH3297 and DE6070. He arrived in Vancouver on Saturday, October 13, 2007 at 1520 hours. Significant events during this period include the fact that this was a very long flight time with a lay over in Frankfurt and a delayed landing in Vancouver (ETA 13:42).

An episode occurred during the boarding process in Frankfurt, where Mr. Dziekanski ended up sitting in the wrong seat on the plane and was asked to move to the correct seat. During this process, one of the attendants thought they smelled alcohol on Mr. Dziekanski's breath and he was advised to not drink alcohol during the flight. His behavior at that time was "normal".

After disembarkation at Vancouver International Airport (YVR), it was apparent that Mr. Dziekanski spoke no English or French and so was referred "as a language referral" to secondary immigration. The records indicate that he was examined in secondary about 6.5 hours after clearing primary immigration and was finally released at 00:45 hours on October 24, 2007. This was more than 9 hours after landing.

He moved out of the secondary area and was seen in the lobby and was last seen in this area moving to the main exit point at 00:52 hours. During this period it was noticed that Mr. Dziekanski was somewhat "groggy" and notably fatigued. He appeared somewhat impatient. Several observers were of the opinion that these behavioral symptoms were felt to be consistent with behavior displayed after a long flight and the added frustration of being unable to speak English. It should be pointed out that during this period "at no time did he display any signs of behavior that would be cause for concern". "Throughout the processing in Immigration Secondary, the traveler was cooperative and did not display any signs of erratic or aggressive behavior". In addition, during this period he was "drinking" in the form of receiving water 5-6 times from various attendants. The subsequent events involving the altercation with the limousine driver and after that, Mr. Dziekanski's behavior, as witnessed on the video by

Pritchard, stand, in contrast. The short time frame from the altercation with the limousine driver to the unusual defensive behavior by Mr. Dziekanski, as seen on the video by Pritchard, supports the position that the two are to some degree probably causally related.

At 01:33 hours, some forty minutes after he was last seen in the lobby, car 62552 from the BC Ambulance Service was dispatched to YVR in response to a call that a man who had been tasered. They arrived just after the Richmond Fire/Reserve truck, which had also been summoned. Cyanosis was noticed. After some delay, handcuffs were removed and Mr. Dziekanski was rolled over from his stomach to his back. He was cyanotic, incontinent of urine and lifeless. His heart had stopped and he had stopped breathing. Chest compressions were started at 01:43 and subsequent monitoring using the fire departments AED, at 01:46, advised that no shock was indicated. The Advanced Life Support Team arrived at 01:48 and took over. Attempts to resuscitate Mr. Dziekanski were subsequently terminated and he was pronounced dead at 02:10 hours. The crew report form for all pulseless and all trauma criteria patients, indicates that Mr. Dziekanski was in asystole (no heart beat) at 01:50 hours and remained in this state except for one period of PEA (pulseless electrical activity) at 2:08 hours, in response to the use of epinephrine.

The video filmed by Paul Pritchard gives a visual and auditory account of Mr. Dziekanski during part of the period from 00:52 to around 1:30 when the RCMP arrived and Mr. Dziekanski was tasered, restrained and then died. The initial part of the video entitled "holding chair" lasts 2:56 minutes and shows a very exhausted looking, anxious and seemingly frustrated Mr.

Dyziekanski in the doorway from the immigration area to the exit lobby. He appears to be putting chairs and a desk in the way of the doorway to keep it from closing. It is evident that either by design or for some other reason he was drawing attention to himself. He comes out for a brief moment and one can hear him speak in Polish in a normal tone of voice. He is active but not moving in a bizarre fashion.

A female approaches him in a calm voice and tries to calm him using her right hand to indicate directions such as to put a small table down. He appears to respond to her.

The second part of the video lasting 5:55minutes entitled "Tazering" shows a more frustrated Mr. Dziekanski who throws a computer at the ground and then throws a small table at the glass window partition. This is in full view of bystanders and just as two security officers arrive and block the exit. Bystander conversations at this time include repeatedly and mistakenly calling out that he is speaking Russian. Someone points out the need for an interpreter as well and a female says something like "don't scare him, just leave him". This comment is not clear to me except for the word "scare".

One security officer stands in the exit doorway area in what can be seen to be a defensive position. He is wearing leather gloves. Mr. Dziekanski retreats back inside the doorway. Shortly after this, at approximately 3:25 of the video tape, four RCMP constables or officers arrive and take a just a few moments to engage Mr. Dziekanski. Mr. Dziekanski turns to back away from them and raises his hands in what appears to be an appropriate gesture of cooperation.

The officers quickly surround him and at approximately 3:51 minutes of the video tape he is tasered frontally. He turns and falls and cries out repeatedly in obvious severe pain and remains on the ground. He is tasered a second time after a one second break and at approximately the same time as he falls to the ground. In response to being tasered, his arms fly up and a stapler he is holding falls to the ground.

Comparing the taser printout with the Pritchard tape, it can be deduced that the third and last probe mode tasering ends at approximately 4:18 of the tape. Later one officer who remains standing, circles the prone Mr. Dziekanski with what appears to be a taser in his right hand and another sound is heard at approximately 4:33 minutes of the tape. During this period the three other officers attempt to restrain Mr. Dziekanski and put handcuffs on him. One officer can be seen kneeling on the area of the upper back and neck but it does not appear that the restraint on the part of the officers is overly aggressive in terms of neck holds, striking him and despite putting kneeling weight on him. Mr. Dziekanski can be heard to cry out several times during this period, his chest can be seen to move and he continues to be active considering the restraint until approximately 5:30 of the video tape, when he stops any movement and his chest appears to stop moving. The period of time from the end of the third probe mode frontal tasering to the apparent collapse of Mr. Dziekanski is approximately 72 seconds (4:18 to 5:30). (Dr. Di Maio gives a shorter period of only 27 seconds from after the last taser until he went limp. This estimate predicts 51 seconds or less from the end of the third episode of tasering (30 + 27), to when he went limp).

Around this time, Mr. Dziekanski is handcuffed, approximately 90 seconds from the start of the struggle. Constable Bentley noticed Mr. Dziekanski had turned blue indicating a loss of circulation and cyanosis 15 to 20 seconds after being handcuffed. A bystander indicates that he has heard a code red called, indicating that Mr. Dziekanski had now become unresponsive and may require cardiopulmonary resuscitation. Almost immediately after he is handcuffed, Mr. Dziekanski is noticed to be making a snoring noise. He did not move again. Shortly after, an ambulance was called to attend. The ambulance call was upgraded to code three seconds later. It should be pointed out that it takes some time for cyanosis to develop. This implies that he was developing cyanosis for a period of time prior to this observation.

The taser printout indicates he was tasered almost continuously over a 49 second period (01:23:43 to 01:24:32). It took another approximately 41 seconds after tasering for Mr. Dziekanski to be handcuffed and for his breathing to be noticed to be like snoring. However, it was no more than 72 seconds from the end of the third tasering to when movement stopped and less than a minute after that that he was noticed to be blue or cyanotic. This raises the issue that if cyanosis took some time to develop, perhaps one or two minutes, then the possibility exists that the fatal arrhythmia could have developed within a minute of the third tasering.

The logical sequence of first developing an arrhythmia, then going unconscious and later developing cyanosis makes intuitive sense. This is as opposed to the alternative order of going unconscious then developing an arrhythmia. It is difficult to understand, in the absence of a blow to the head

or a seizure, why a prone person, with a good carotid pulse, would go unconscious.

However, against this logical sequence of events is the testimony that Mr. Dziekanski's breathing and pulse were monitored during this period. If it is true that he did, in fact, have a pulse and was breathing up until close to the time when cyanosis noticed, then the arrhythmia must have developed minutes after the third tasering and direct capture of the heart by the taser can be ruled out. However, if the assessment's that were done were inadequate to correctly monitor the pulse and breathing, then direct capture of the heart and the possibility of an arrhythmia such as ventricular tachycardia remains a possibility.

Several witnesses including RCMP officer Bentley, have indicated that they saw only one person do a single assessment of the pulse of Mr. Dziekanski and this was not one of the RCMP officers. This assessment of pulse can be viewed on the Pritchard video. It lasted only 6 seconds which is very short period and inadequate, in my opinion, to accurately assess Mr. Dziekanski's pulse. Assessment of breathing is not evident on the tape.

In my opinion, a better procedure would have been for the RCMP officers to be the ones to initially check and then regularly monitor Mr. Dziekanski's pulse and respirations. This is as opposed to relying on the assessment of someone else. We will never know but this may have allowed for the earlier initiation of CPR, closer to the point when Mr. Dziekanski developed the fatal arrhythmia.

Mr. Dziekanski was pronounced dead at 02:10 hours on October 14, 2007. A forensic autopsy was undertaken by Dr. C. Lee, a forensic pathologist, on October 16, 2007. This detailed autopsy revealed a number of relevant findings. There was no evidence of death due to a heart attack or stroke. The coronary and cerebral arteries did not contain atherosclerosis. There was no evidence of neck trauma or lung findings to suggest death due to asphyxia or strangulation. There was no evidence of a pulmonary embolism or other findings to determine an obvious immediate cause of death. Toxicology did not detect any alcohol, cocaine, opiates or any other drugs in the blood. Positive findings included rib fractures common after resuscitation procedures and a central chest lesion consistent with an electrode from a taser. There was evidence of a fatty liver with macrovesicular steatosis. However, there was no evidence of liver cirrhosis. There was moderate to severe atrophy of the cerebellar vermis of the brain. It was noted that the heart was visibly dilated and the left ventricle wall had a thickness of 1.3 cm. The heart weighed 370 gm. The heart muscle itself showed no scarring or signs of acute infarction or damage. Microscopic examination of the heart muscle was initially found to be abnormal, but I understand that Dr. Lee, on review, has confirmed that no fibrosis or other microscopic findings consistent with a cardiomyopathy were found.

Dr. Lee, in his autopsy report, under Principle Pathological Findings listed: 1. No significant injuries 2. Fatty liver, atrophy of the cerebellar vermis, dilated heart. 3. Negative toxicological examination 4. No atherosclerosis. Under Principle Cause of Death, Dr. Lee listed: a. Sudden Death During Restraint and under Contributing Factors, he listed: Chronic Alcoholism.

Given the absence of any other immediate cause of death such as suffocation or heart attack, the autopsy findings indicate that the immediate cause of death was electrical. By that, one can assume that Mr. Dziekanski suffered an electrical death whereby his heart developed a fatal arrhythmia. Whether it was some form of bradycardia, salvos of ventricular ectopic beats that lead to ventricular fibrillation or ventricular tachycardia, we will never know for sure the actual arrhythmia that lead to his death.

But we are left with no other conclusion other than, Mr. Dziekanski died from some form of fatal arrhythmia that resulted in his heart stopping (electrical death).

Published medical literature supports the above assertion that in situations of sudden unexplained death, where there is an absence of autopsy findings to the contrary, the cause of death can be attributed to a cardiac dysrhythmia or what is commonly called electrical death. For example, whether, it is a study of blunt chest impact in young athletes "presumably delivered at an electrically vulnerable phase of ventricular excitability" causing sudden death or whether it is middle aged men without clinical coronary heart disease in the MRFIT study (Framingham), the presumed mechanism of death is a fatal dsyrhythmia. Other articles indicate that in those under 35 years of age "unexplained deaths, (are) presumed to result from sudden primary arrhythmogenic causes". The general point is that deaths without obvious cause are assumed to be electrical deaths and due to a cardiac dysrhythmia. This assertion was previously presented during Phase I of the Braidwood Inquiry as well.

In the case of Mr. Dziekanski, the next step in the process of determining probable causation is to assess those risk factors that might have caused the fatal arrhythmia, their timing and risk relative to each other.

For individuals who die unexpectedly, at an age similar to Mr. Dziekanski, more than half die as a complication of coronary atherosclerosis. Most of the remainder will die from other identifiable conditions, such as pulmonary embolism and drug overdose. However, in the case of Mr. Dziekanski, the coronary arteries were found to be normal and no evidence of pulmonary embolism or drug and alcohol use was found. Therefore heart attack, coronary ischemia due to atherosclerosis and death due to drugs can be ruled out.

Another uncommon but possible causative risk that should be considered, in this case, is that of delirium tremens (DTs). This condition has been associated with sudden death due to an arrhythmia. This is a condition where those who are chronic alcoholics and who stop drinking, after a period of time, often 2 to 3 days, develop profound confusion, hallucinations, agitation and delusions. There is also marked tremor and increased autonomic nervous system activity as observed by dilated pupils, profuse sweating, fever and tachycardia. Most often, these alcoholics have a past medical history of withdrawal and other events often associated with severe alcoholism.

In the case of Mr. Dziekanski, the time frame appears wrong, given he was thought to have consumed some alcohol within the last day. Further, in the video tape taken at YVR, Mr. Dziekanski does not appear to be grossly delusional or hallucinating, nor does he have a tremor or other

manifestations of DTs. His "calm" normal behavior in the hours prior to his death with various personal also argues against this man having suddenly developed DTs in the minutes after the altercation.

Excited delirium as described in the text by Ross can also be ruled out, in my opinion, as the cause of Mr. Dziekanski's death. While this condition is not recognized as a true condition by many, including the American Medical Association, there are proponents for this being a recognized syndrome. It is often used today to describe people taken into custody and who die suddenly. Published information on this condition indicates that excited delirium is most commonly precipitated by drug use. Otherwise, it mainly occurs in those with severe psychiatric illness.

Typically, it would involve a young man high on cocaine. Mr. Dziekanski does not fit this profile as he was older, not overtly psychotic and was not high on any drugs. Further, the syndrome's main common presenting features, as described in "Sudden Deaths in Custody" by the editors Ross and Chan are not present in this case. Symptoms like violent agitation for some period prior to being restrained, severely bizarre behaviors such as jumping through a window, screaming and shouting, extreme exertion and hyperactivity and hyperthermia are not evident on the video. The strong response to the pain of being tasered as opposed to ignoring it, including crying out and dropping to the ground, also do not particularly support excited delirium as being present.

Considering other potential risk factors, Mr. Dziekanski had completed a 20 hour long flight including delays. This must have been somewhat exhausting

and somewhat stressful. In addition, when he landed he underwent a further 9 hours of what must have been an even more exhausting and stressful period at the airport. Not connecting up with his mother, delays, not being able to communicate with anyone in Polish, his only language and the altercation with the limousine driver must have been very stressful.
It is known that fatigue and stress cause physiological changes, in the body. Bodily stores of energy are used up. The blood pressure and heart rate increases.

A term "hyper adrenergic state", as adrenalin is involved, is used here to describe this physiological response to acute stress. It is known that it can be associated with hyperventilation such as was seen on the video. It is my opinion, that Mr. Dziekanski's heart would have been somewhat stressed during this period leading up to the restraint period. He was probably hyperventilating, his blood pressure was probably elevated and his heart rate would have been raised from normal. This would have increased the stress on his heart and in particular on the electrical part or conduction system of the heart.

Even if one assumes that Mr. Dziekanski did, in fact, have a mild cardiomyopathy and the evidence is lacking for this, it should be pointed out that sudden death in those with a mild cardiomyopathy is extremely rare and the vast majority will die from causes other than sudden death. In my opinion, the risk due to any presence of a cardiomyopathy had a very low probability, by itself, of causing the death of Mr. Dziekanski. This understanding should be confirmed with the expertise of a trained and experienced cardiologist. I have done this and consulted with Dr. Kerr who

confirmed the low probability of sudden electrical death in those with a mild to moderate cardiomyopathy.

What is very compelling about the death of Mr. Dziekanski is the temporal relationship or the timing. Any risk due to being susceptible to an arrhythmia had to have been there for a long time and probably years without causing a fatal arrhythmia. Also, Mr. Dziekanski had been in a state of stress and fatigue for many hours and for nine hours at YVR. During this extended period of over 29 hours of stress, a fatal arrhythmia had not occurred. It should be clear that the combination of the stress of the flight, the further stress of the nine hours in the airport and any underlying unknown cardiac risk were insufficient to cause a fatal arrhythmia.

However, in the minute or two, from the start of the restraint effort and tasering, by the RCMP, Mr. Dziekanski had died. This relatively short period of time as well as strong temporal relationship to the death of Mr. Dziekanski, forces one to consider these two remaining risk factors and possible mechanisms by which one, the other or both could be causally related to his death.

With this in mind, one can consider mechanisms by which the stress of physical restraint can trigger sudden death or a fatal arrhythmia. These have been reviewed by E. Laposta in the text "Sudden Deaths in Custody". While the mechanisms are complicated, they basically involve activation of our primitive "fight and flight" response. Adrenalin (epinephrine), cortisol and norepinepherine are released as well as a cascade of other neurohormones. The result is blood pressure rises, the heart rates goes up, the metabolic rate

goes up, blood is diverted to muscles which increases their strength and blood sugar rises. Glycolysis occurs in the liver and muscle stores of energy. Byproducts can include lactic acid and a more acid environment in the blood. The result is to make the heart more vulnerable to "fatal cardiac arrhythmias". Sudden cardiac deaths are known to be more common in the morning when adrenalin levels are highest and during stressful events such as earthquakes or disasters.

It should be noted that the biochemical response to restraint is to some degree affected by the person's perception of the event. That is the more upset the person is based on the perception of what is happening to them, the more intense will be the physiological "fight or flight" response.

Secondly, and considering the taser, the pathophysiological mechanism of risk of death due a fatal arrhythmia triggered by overwhelming the fight or flight response as described above, would also apply to the response to stress caused by tasering. In this case, the hyper adrenergic state and risk of a fatal arrhythmia would be driven by the extreme pain and muscle feedback to the brain via spinal cord pathways due to the effects of repeated tasering. This plus the associated anxiety of being tasered, and the effects of immobility would certainly have caused a severe "fight or flight" response.

Further, the sudden capture and tetany of nearly all of the large skeletal muscles of the body would have caused the release of lactic acid. It has been argued that under study conditions this has not shown to be a major issue. But the degree of acidosis caused by the release of lactic acid is not known under real world stressful situations and under situations whereby someone

is tasered 5 times or almost continuously for 49 seconds. This other potential mechanism, whereby a metabolic acidosis rendered the heart more susceptible to a fatal arrhythmia remains a possibility, in my opinion.

Finally, considering mechanisms by which tapering could possibly, directly induce a fatal arrhythmia, these have been reviewed in published literature. Much of this literature was presented in Phase I of the Braidwood Inquiry. To review, if the electrode was placed over the chest, as it was in this case, then the risk or probability of direct cardiac capture would have been increased as opposed to being tasered in the back. Again, if more than one 5 second shot was fired close together, in terms of time, as happened in this case, then the risk of direct capture of the heart would also be increased as opposed to a single shot. It is conjecture, but the risk of direct capture would appear to be increased if someone were rolling on the ground with someone forcing their chest against the ground. The possibility of the electrode being directly closer to the heart exists. The same would be true if the taser malfunctioned, for some reason, and delivered a current higher than expected.

In the case of Mr. Dziekanski, there appears to be at least a delay of one to two minutes from the end of the tasering to when movement stops and several minutes from the end of tasering until it is clear that he is in cardiac arrest. Testimony exists that Mr. Dziekanski had a pulse and was breathing for a considerable period of time and several minutes after the tasering. This argues against direct capture of the heart and the development of ventricular fibrillation. It also argues against the scenario where the initial arrhythmia is

ventricular tachycardia with some function for a minute or two that allows Mr. Dziekanski to remain conscious during this initial period.

As background, it should be pointed out that the problem of a lack of much needed data and research to define and measure the taser's true risk, in real world populations, makes the issue of assessing a causative relationship problematic. This issue was pointed out in Phase I of the Braidwood Inquiry. This is especially true in assessing the relative risk of physical restraint including taser vs. physical restraint without taser. As presented in Phase I of the Braidwood Inquiry, this is a very complicated area that needs large controlled trials and/or large independent prospective data base studies to answer the questions. When assessing to what degree did the tasering contribute to the death of Mr. Dziekanski, one cannot rely on published data and one is forced to rely on other methods of assessing the possibility of a causative relationship. The strong temporal relationship, a plausible biological mechanism and the analogy of how deaths due to physical restraint are thought to occur support a causative role for the use of the taser in this case.

Further, in the case of Mr. Dziekanski, we are dealing with a rare or very low probability event. That means that, in the absence of more common and obvious causes, a rare factor or factors could and probably were causally in play and at least one of them contributed to the death of Mr. Dziekanski.

In assessing the impact of the physical restraint by the officers and the effect of the tasering in contributing to the electrical death of Mr. Dziekanski, it is important to review the video tape by Pritchard. This is in order to assess,

whether or not either of the two interventions appears to have had a much greater stress response. We don't have blood pressure readings or pulse rates only visual and auditory clues. In this case and in my opinion, it appears that the tasering had a far more violent affect on Mr. Dziekanski, as opposed to the actual physical restraint. He cried out in pain several times after being tasered. He dropped to the ground and writhed. The video tape shows that Mr. Dziekanski's outward response to physical restraint appears to be significantly less violent and reactive than to the effects of the taser. This would argue that in terms of a physiological response, the taser would elicit a stronger response than physical restraint.

Summary Opinion:

Mr. Robert Dziekanski died while being restrained at YVR. The mechanism of his death was that of an electrical failure of his heart where he developed a fatal arrhythmia. The records show his sudden unexpected death was unlike most of those who die suddenly. The more common causes of sudden unexpected death can be ruled out. These include death due to a heart attack or ischemia from coronary artery disease, death due to the effects of drugs including alcohol, or death due to a pulmonary embolism. Less common causes of sudden death can also be ruled out including electrical death secondary to severe psychiatric illness.

Similarly, death due to an attack of delirium tremens should be ruled out as being highly unlikely. In terms of death during restraint, Mr. Dziekanski does not fit the profile of someone with excited delirium as described above.

This condition can also be ruled out as a being highly unlikely as a contributing factor. Further, any risk of developing a fatal arrhythmia due to an underlying cardiomyopathy is also insignificant in this case.

By exclusion, the significant risk factors remaining are the stress and fatigue of a 20 hour flight, the 9 hour stressful period at YVR, the act of physical restraint by the RCMP and the act of tasering.

It is clear that over 20 hours, flight stress and any underlying heart risk was insufficient to cause a fatal arrhythmia. It is also clear that the additional stressful period at YVR over many hours, also was not sufficient to create a hyper adrenergic state of such severity that a fatal arrhythmia occurred. The position that Mr. Dziekanski would have had a fatal arrhythmia in the absence of the tasering and or the restraint is untenable in my opinion.

According to the video tape and records, Mr. Dziekanski appears to have collapsed and subsequently died within a minute or two of being tasered and physically restrained. This short period of a few minutes as opposed to hours is a strong argument for a likely causal relationship, considering an absence of other risk factors as described above.

As pointed out above and again in my opinion, a lack of independent controlled studies using real world experience on which to assess the true risks or benefits of tasering in situations such as at YVR makes it difficult to assess whether tasering alone, physical restraint alone, or some combination of the two was sufficient to trigger the fatal arrhythmia and death of Mr. Dziekanski. However, the temporal relationship does argue strongly that

one, the other or both contributed to the death of Mr. Dziekanski. Further, the biological pathway of a physiological response causing a fatal arrhythmia, as described above, would apply to both the use of the taser and to physical restraint. The video tape indicates that outwardly the taser appeared to have had a more powerful physiological effect than physical restraint. Further, the taser is known to have other identifiable and potentially fatal biological pathways that don't apply in the case physical restraint alone.

In my opinion, the two most significant contributing causes of the death of Mr. Dziekanski were the act of tasering and the act of physical restraint. Further, the mechanism of death was most likely the creation of a hyper adrenergic state that caused or brought on a fatal arrhythmia, although the possibility of direct capture of the heart and the development of ventricular tachycardia cannot entirely be ruled out.

The extended period of tasering appears on the tape by Pritchard to have been a great deal more stressful to Mr. Dziekanski than the act of physical restraint. So while both most likely contributed to the death of Mr. Dziekanski, in my opinion, the act of tasering Mr. Dziekanski for 31 seconds over a period of 49 seconds, contributed more to his stress response and subsequent demise than physical restraint.

Yours Sincerely,

Dr. Keith Chambers
GK Chambers Consulting Inc.