CANADA
Province of Alberta

Report to the Minister of Justice and Attorney General
Public Fatality Inquiry

Fatality Inquiries Act

WHEREAS a Public Inquiry was held at the The Provincial Court of Alberta, Provincial Court Building, 323 - 6 Avenue S.E.

in the City (City, Town or Village) of Calgary (Name of City, Town, Village)

on the 19th day of April , 2004 year

on the 20th, 21st, 22nd and 23rd day of April , 2004 and

by adjournment on the 16th Day of July , 2004

before The Honourable W.N. Gilbert . a Provincial Court Judge.

On the 22nd day of March , 2005 and

by adjournment on the 24th and 29th day of March , 2005 year

before The Honourable B.C. Stevenson , a Provincial Court Judge.

A jury [ ] was [X] was not summoned and an inquiry was held into the death

of Nadia Diamond Kanji (Name in Full) 18 (Age)

of Calgary, Alberta (Residence) and the following findings were made:

Date and Time of Death: July 31, 1998

Place: Farm field just south of the Beiseker Airport, Beiseker, Alberta

Medical Cause of Death: ("cause of death" means the medical cause of death according to the international Statistical Classification of Diseases, Injuries and Causes of Death as last revised by the International Conference assembled for that purpose and published by the World Heath Organization – The Fatality Inquires Act, Section 1(d)).

Multiple blunt injuries due to malfunction of main parachute and reserve parachute deployed too close to the ground.

Manner of Death: ("manner of death" means the mode or method of death whether natural, homicidal, suicidal, accidental or undeterminable – The Fatality Inquiries Act, Section 1(h)).

Accidental

Report

Circumstances under which Death occurred:

On July 31, 1998, just over seven years ago, 18 year-old Nadia Kanji fell to her death during a parachuting activity supervised by the Calgary Skydive Centre, Inc., at or near their training and jump facility at the Beiseker Airport in Alberta. That facility was also known as the Skydive Ranch, Inc., and will hereinafter be described as "the Ranch".

On July 30, 1998, the day before the accident, Ms. Kanji and two female friends, Narisha Shariff and Sabrina Hasham, having contracted with the Ranch on July 28, 1998 to parachute, attended at the Beiseker facility for parachute jump training.

The three ladies met at the Beiseker Airport at approximately 9:00 a.m. and were assigned to Gerald David Henry Clarke (also known as "Taffy") to be their training instructor and jump master.

In addition to the three ladies, the course instruction was attended by approximately twenty British military personnel from CFB Suffield in southern Alberta.

Clarke was the only instructor for everyone in the group, and the entire instruction period lasted for about six hours, including a one-hour break for lunch. All participants were shown six videos called "chapters". Following each chapter, the particular training aspect was practiced by the students. A final written multiple choice exam was conducted at about 3:00 p.m., after which the group was considered by the Ranch personnel to have sufficient training to jump.

Due to weather conditions, the group was advised that their anticipated jumps would have to be postponed until the following day (July 31, 1998).

The three ladies arrived at the Beiseker Airport on July 31st at about 11:00 a.m. They were accompanied by Nadia Kanji's father. Final arrangements were made for their first parachute jump, which included observing video tapes of British military personnel who had jumped earlier that morning, renting jumpsuits, conducted two aircraft simulations on the mock aircraft, donning their parachute packs, and conducting a mock trial of the "malfunction procedure". Clarke checked the equipment of each of the ladies after they put their assigned parachutes on.

Nadia Kanji was assigned parachute pack Number 86, and Narisha Shariff was assigned parachute pack Number 71.

The elapsed time of the "refresher" training was estimated to be 8-9 minutes.

The three ladies, along with Clarke, then boarded a Cessna 182 aircraft piloted by Jeffrey Grant Klaiber and his passengers took off and climbed to an altitude of between 2,800 and 3,500 feet above ground, which is the altitude that the Ranch used for first-time jumpers.

Klaiber observed Clarke instructing Narisha Shariff, who then jumped. Klaiber noticed that her parachute appeared to be only partly deployed, with one portion of the parachute appearing to be collapsed. According to Klaiber, Clarke did not appear to be observing Shariff's apparent malfunction or descent, as he had turned his attention to and was preparing Nadia Kanji to be the next jumper. He stated that attempted to "nudge" Clarke to get his attention to no avail.

Nadia Kanji then jumped from the aircraft, and Klaiber made the same observations about her parachute and descent as he had concerning Shariff. Again, Clarke did not appear to be watching Kanji's descent as he was preparing Sabrian Hasham for her jump. Shariff's and Kanji's jumps were only seconds apart.

At that moment Paul Sather, a ground controller employed by the Ranch, radioed Klaiber to stop Hasham's jump. Klaiber relayed the order to Clarke, together with Sather's instructions to Clarke that he should jump in a bid to assist Shariff and Kanji. Clarke thereupon brought Hasham back in to the aircraft and jumped. Klaiber, on instructions from James Mercier, circled the area for about ten minutes prior to landing with Hasham.

Observers of both Shariff's and Kanji's jumps included members of the British military personnel on course, several airport workers, and a farmer. All stated that both parachutes appeared to be collapsed at one end which caused the jumpers to descent more rapidly than normal, and in a spiraling motion. One witness observed the parachute lines to be over the top of the chutes causing them to be unable to fully open. It is notable that several of these witnesses were experienced skydivers.

When Kanji was 200-300 feet above the ground her main parachute cut away and her reserve chute began to deploy; however, she was too close to the ground for full deployment. Both Shariff and Kanji plunged, one after the other, at considerable speed, into the field. Shariff's reserve parachute never deployed at all.

Shariff suffered serious life-threatening injuries, including broken ribs on her right side; one rib sticking out of her body that was surgically removed with the nerves; a fractured pelvic bone; a laceration to her liver; both kidneys were bruised, and her thracic vertebrae was fractured. She was hospitalized in the ICU in Calgary for approximately six weeks. She underwent physical therapy for two years - in the first year, every day for eight hours, and in the second year, every day for two to three hours.

Nadia Kanji died at the scene from multiple blunt force injuries.

At or about 12:30 p.m. Shariff's main canopy and rigging was seized by the RCMP. Kanji's rigging and reserve canopy remained with her body. At about 4:00 p.m. Michael Soboren, an employee of the Ranch, contacted the RCMP and advised them that Kanji's main canopy had been located by a farmer and taken it to the Ranch facilities for safe-keeping. He also advised the RCMP that he has examined the canopy and video-taped its condition. Some four hours later the RCMP seized Kanji's main canopy.

The Inquiry was greatly aided the expert opinion of Allan MacDonald, Manager, Flying High Manufacturing, Inc. of Claresholm, Alberta. Mr. MacDonald was asked by the RCMP to examine both parachutes and riggings worn by Shariff and Kanji on the day of the accident.

MacDonald began his report and evidence in relation to the equipment worn by Shariff. He was strongly critical of some aspects of that equipment. For example, with respect to Shariff's main and reserve parachute container (which still had the reserve chute within) he had this to say:

> "There was no packing card pocket, warning label or container date plate. (The date plate contains the name and address of the manufacturer, model, size, sometimes the weight, s/n, date of manufacture (DOM), and certification of approval information). There were remnants of a warning label that had been cut off and there were remnants of the packing card pocket/container data plate that had been cut off. There was no rigger's seal on the ripcord pin, or evidence of any sealing thread on the ripcord pin and there was no reserve packing card."

And later, in the same section of his report concerning Shariff's equipment:

> "The parachute diaper was placed in the bottom right corner of the reserve container, although the packing instructions called for the bottom left corner."

In the section of Mr. MacDonald's report entitled "Automatic Activation Device" (AAD) we find the following commentary:

> "The ADD is designed to sense the altitude above ground and rate of descent. If the firing parameters are met (the ADD-equipped falling through the pre-set firing altitude at a rate of descent exceeding 40-50 feet per second) the unit is designed to pull the reserve ripcord pin, thus initiating the opening sequence of the reserve parachute. This unit was mounted on the harness and the container."

These critical comments follow:

> "The AAD was not marked as chamber tested for the previous 120 repack cycle. The AAD was set to "On" position and had not fired. The terminal end was not tightened properly onto the end of the power cable; it would unscrew with negligible pressure."

One of the primary concerns arising during the Inquiry focused on the apparent malfunction ("line-over") of the two parachutes in a row. I do not believe the testimony of several of the officials/employees of the skydive facility who denied the "line-over" observations of other witnesses. I am satisfied that the parachute malfunctions were a result of a "line-over" situation; further, as I will comment upon later, I am satisfied that the "line-over" occurrences were a direct result of faulty and/or unsupervised parachute packaging.

Getting back to Mr. MacDonald's report and his comments about the main and reserve parachute container, he states:

> "It is highly unusual to find a parachute harness/container system with no serial number or other means of identification. The information contained on the manufacturer's data panel helps out the user of the equipment by ensuring the correct equipment is selected, that it means a standard and that they can identify it and prove ownership. It helps out the rigger who is responsible for maintaining and repacking the equipment by ensuring that the proper packing instructions are used, the size and type of parachutes are compatible with the container, and the manufacturer's address is available for any technical or operational questions or updates. It also helps out the owner or jumpmaster responsible for use of the equipment to make sure that the operating parameters of weight and speed restrictions will be met.
>
> Removal of the data plate instantly voids the TSO certification of the parachute equipment, as well as any factory warranties. In the United States, as well as many other countries, it is against the law For a rigger to repack a reserve parachute into an uncertified container to be used for intentional jumping. It is also against the law to use (i.e. wear) non-certified parachute equipment in an aircraft. IN CANADA, THERE ARE NO SUCH LAWS. (Emphasis mine).
>
> I have no reason to doubt that this main and reserve parachute container system (Shariff's) was manufactured by a Florida company called "Sunpath"; this being the model "Javelin" (the only model they make). Sunpath specifically stated to me "Do not pack a reserve parachute into a container that has no serial number or data plate."

Concerning the removed warning label, Mr. MacDonald's report addresses the issue directly:

> "All of the US manufacturers who display a warning label on their parachute equipment state that removal of the warning label voids the TSO and any warranties. The warning label notifies the user of risks using the equipment and minimum training or experience requirements. It states on the label that the rigger assembling the main and reserve parachutes into that harness/container system must fill in the types of parachutes, manufacturer of each type, and the maximum suspended weight and deployment speed restrictions."

Mr. MacDonald comments on his finding that there was no rigger seal, thread or packing card in relation to the Shariff equipment:

> "In the United States, a reserve parachute shall be sealed by an appropriately rated FAA rigger. The rigger shall also write, on the parachute packing record attached to the parachute, the date and place of the packing and a notation of any defects he finds on the inspection. He shall sign that record with his name and the number of his certificate.
>
> Sunpath requires that the Javelin reserve container be sealed, and the work done must be logged on the packing data card and in the rigger's logbook. The completed data card must be placed in the pocket provided on the underside of the reserve top flap cover.

> In Canada, the Canadian Sport Parachute Association (CSPA) Requires a certified parachute rigger (CSPA or FAA) to seal the container in accordance with the manufacturer's recommendations, and the packing card will have the following information recorded: date, place of packing and repairs, rigger's signature and certificate number, canopy type and s/n, manufacturer's name and date of manufacture, owner's name and address and pull force test results. In the case of a CSPA commercially operated center where the equipment will not leave the normal place of operation, the above required information may be kept in an easily accessible master log and the reserve parachutes do not have to be sealed at each repack.
>
> IN CANADA, THERE ARE NO LAWS GOVERNING WHO CAN REPACK A RESERVE PARACHUTE, HOW OFTEN IT HAS TO BE DONE, OR ANY OTHER CRITERIA ON DESIGN, MANUFACTURE, MAINTENANCE, REPACKING OR USE OF EMERGENCY PARACHUTE EQUIPMENT. BECAUSE MEMBERSHIP IN CSPA IS NOT MANDATORY, THERE IS NO REQUIREMENT (LEGAL OR OTHERWISE) FOR ANYONE WHO DOES NOT WISH TO BE A MEMBER OF THIS ASSOCIATION TO FOLLOW ANY RULES WHATSOEVER." (Emphasis mine)

However, even with these comments, Mr. MacDonald goes on to state in his report:

> "Although the reserve parachute was not packed according to the manufacturer's instructions, this error would most likely have no affect parachute deployment sequence."

Mr. MacDonald reflects on the Automatic Activation Device examined by him, and, in particular, his concern about the loose terminal end, as follows:

> "Obviously, the AAD would be rendered ineffective if the power cable was to become disconnected from the ripcord pin. Because the terminal was very loose on the end of the power cable, it could easily have come undone with the vibration in the aircraft and ground handling (similar to untightened nut and bolt coming loose in a car). THIS UNDUE CARE ON THE PART OF THE RIGGER WHO LAST REPACKED THE RESERVE PARACHUTE ON THIS EQUIPMENT." (Emphasis mine)

He was also quite critical of the "obvious undue care and attention" by the riggers who used the "Lbar" style connector link in packing the reserve parachute. His expert opinion was that the end of the riser [was] not designed for the Lbar connector link; rather, the gap between the end of the reserve risers and the start of the stitch pattern is specifically designed to accommodate the "Rapide" or quick link style of connector link.

If the Lbar connector link is used, then the stitch pattern has to be up tight against the Lbar. The large gap of material between the Lbar and the stitch pattern can allow the link to twist up 90 degrees in the riser – "the quality of the deployment could suffer"; the [gap of material between the Lbar and the stitch pattern] could allow the lines to slide to one end of the link, effectively changing the line lengths on that line group, and allowing the canopy to open somewhat off center."

In addition to the concerns expressed by Mr. MacDonald about the main and reserve parachute container, the Automatic Activation Device, the packing of the reserve parachutes, he went into a considerable critical commentary on the "toggle" placement in the locking loop. He states:

> "The incorrect placement of the toggle in the locking loop, resulting in the locking loop tightening up on the softer area of the toggle after the stiffened section, could be one reason why [the surviving jumper] complained that [she] could not pull one of the toggles down."

He summarized his findings with respect to the Shariff equipment as follows:

> "MAIN AND RESERVE PARACHUTE CONTAINER: SYSTEM "71"
>
> Speculation on my part as to why the warning label, manufacturer's data plate and reserve packing card pocket have been removed is that there is something to hide. This could include the following: 1) an attempt at removing traceability and therefore liability for negligence on maintenance, or lack of maintenance, on the equipment; 2) the equipment has been stolen; 3) the equipment has been illegally imported or smuggled into Canada. Although the Single Operation cutaway/reserve deployment system looks like it would work, it is not a factory-approved modification and I have concerns as to how well it has been tested. The condition and function of the harness/container system did not appear to be a factor in this incident.
>
> AUTOMATIC ACTIVATION DEVICE (AAD): Model 12,000 s/n 11419
>
> As long as the AAD had been chamber tested in the last 120 day repack cycle (or the first installation after the 2-year factory inspection/calibration) it would be considered airworthy for use in a reserve parachute system.
>
> The condition and function of the AAD did not appear to be in an airworthy condition. Because this incident appeared to start with a malfunction on the main parachute, it would seem logical that steps are taken to keep a malfunction from happening again. I would strongly suggest the toggle nose protecting tabs be installed.
>
> Further detailed and important observations on the equipment were impossible to do because the equipment had already been tampered with, and any evidence of the cause of the malfunctions had already been removed (see Shariff's statement: Jim Mercier telling her he has pulled the toggle and it worked fine."

Mr. MacDonald then turned to the results of his examination of the equipment used by Nadia Kanji in her fatal jump.

Mr. MacDonald found that the Kanji equipment was in much the same condition as the equipment used by Shariff, and his critical remarks concerning the latter were repeated in the section of his report relating to that used by Kanji.

One of the problems that Mr. MacDonald faced was the fact that the personnel at the Ranch had retrieved the main parachute used by Kanji and had it in their possession for several hours before they turned it over to the RCMP. During the time when they had it in their possession they apparently tampered with its original state. However, Mr. MacDonald nonetheless conducted his examination of it and the other equipment that remained with Kanji's body.

With respect to the main and reserve parachute container, his observations were, in part, as follows:

> "The container system is designed to hold the main and reserve parachutes, and related deployment components.
>
> Manufacturer – unknown, model – unknown, solid black with "86" embroidered on the left 3-ring stitch cover. A number "3263" was scratched into the plastic on the inside of the top outer reserve cover flap. No serial number or other identification marks.

> The reserve parachute was unpacked, but still attached to the harness. There was no packing card pocket, warning label or container data plate (the data plate contains the name and address of the manufacturer (DOM), and certification or approval information. There were remnants of the packing card pocket/container that had been cut off. There was no rigger's seal on the ripcord pin, or evidence of any sealing thread on the ripcord pin and there was no reserve packing card. The metal reserve backplate was bent. The ripcord had one sharp bend/kink."

After reviewing other details in relation to the container, Mr. MacDonald reported:

> Overall condition of the container system (considering its age based on the year of manufacture of the hardware) is fair, with abrasions and some wear, but serviceable. Overall condition of the harness (considering its age based on the year of manufacture of the hardware is fair, with abrasions and some wear, but serviceable."

He went on to provide observations with respect to the Automatic Activation Device, the reserve parachute (and, as he had found when examining the Shariff equipment, the diaper was not installed in the correct location), the main parachute, and the radio. His detailed comments concerning those items – no serial number or identification of container system; no rigger seal, thread or packing card, bent reserve backplate (which he found was not uncommon, particularly with the force imposed on the container system at above normal speeds); the modified "bottom of container" (BOC) pouch (which he states is quite common); the installed extra pocket; the extra flap ("I have not heard of any situation where this small flap would cause a problem with the deployment of the main or reserve parachute."); the modified cutaway/reserve activation system; the kind in the ripcord cable ("commonly found after a cutaway of the main parachute."); broken legpad to harness stitching (not uncommon where there is higher than normal ground impact speed); removed stitch line ("it appears to cause no harm"); untidy repair (the workmanship was not neat, however the repair was adequate to keep the container in an airworthy state"); no AAD inspection information markings; the firing altitude setting; the fired position ("the AAD could have fired from the rate of descent parameters while below the firing altitude, or it could have fired from shock by impact with the ground"; Rapide links; tacking of links; Ph testing (a Ph test done by myself on the [reserve] parachute confirmed there was no acid contamination of the mesh")' tensile testing ("a tensile test done by myself on this [reserve] parachute (one test in each direction of the fabric weave on one panel only) passed the load requirements"); steering lines removed ("the packing instructions state that the factory-installed connector links (stowing instructions are specified both at the beginning and end of the packing instructions). The steering lines are not installed, but there are clear marking of where they were previously installed. The factory requirements for the toggle stowing could be superceded by instructions from the container manufacturer, however the factory requirements for the steering lines cannot be superceded by instructions from the container manufacturer"); diaper incorrect location ("this modification could affect the opening of the [reserve] parachute"); diaper compatibility ("this is the wrong diaper for the [reserve] parachute"); main parachute (the same commentary about this equipment as he made with respect to the Shariff equipment); radio (he was unable to comment on its functional condition).

Mr. MacDonald made the exact same comments in his summary of his findings with respect to the Kanji equipment as he made following his examination of the Shariff equipment.

One of the major concerns experienced in the Inquiry into Ms. Kanji's death was the apparent attitude of the owners and some personnel of the skydive facility. I was particularly troubled by the apparent manner in which they approached their duties and obligations to co-operate with the investigating authorities. Various statements from witnesses concerning the conduct of James Mercier on the day of and in the days immediately following the accident leaves me with the clear impression that he was going to great lengths to distort the facts of the accidents. Certain other aspects of attempted evidence collected by the RCMP were either impeded or at least interfered with by Mercier or his employees apparently acting on his instructions. There are some statements of opinion by some of these individuals that strain credulity.

Report

SUMMARY OF FINDINGS

While this Inquiry deals only with the death of Nadia Diamond Kanji, the coincidental serious injuries suffered by Narisha Shariff at about the same time after exactly the same training leads me to the following conclusions concerning the overall circumstances that occasioned the death and injuries:

1) Both incidents began with a malfunction of each of the two ladies' main parachutes;
2) The malfunction in each case was a classic "line-over" problem;
3) Both malfunctions were caused or contributed to by mistakes made by untrained parachute packers operating under inadequate supervision by qualified personnel at the jump facility;
4) There was inadequate training of first-time jumpers in relation to malfunctions of the type encountered by Ms. Kanji and Ms. Shariff;
5) The jumpmaster in the aircraft paid little attention (or inadequate) attention to the obvious problems being experienced by Ms. Shariff, and, if he had, he would probably not have allowed Ms. Kanji to jump immediately thereafter;
6) Neither Ms. Shariff nor Ms. Kanji (nor, for that matter, Sabrina Hasham) were adequately instructed on the proper manner and time to deploy their reserve parachutes;
7) The inadequacy of training in relation to dealing with malfunctions such as the one experienced in the two incidents is borne out by the fact that both ladies took incorrect action to correct it;
8) The training of all three ladies in round commands was inadequate;
9) The equipment worn by both Ms. Shariff and Ms. Kanji was, for safety reasons, inadequate. The improper packing of the reserve parachutes in both instances led the expect, Mr. MacDonald, to conclude that they were both "unairworthy";
10) The equipment in use by the two ladies was not kept up to the manufacturers' original standards; in fact, the equipment had been altered in several ways by the facility personnel, without manufacturer's approval;
11) It seems clear that some evidence, such as the last half of the Kanji jump video, was withheld from the RCMP by the ranch personnel;
12) It also seems clear that records in relation to the equipment maintenance and alterations, and the identity of the parachute packers was missing and not turned over to the RCMP as was claimed.

No. of additional pages attached: 1

Report

Recommendations for the prevention of similar deaths:

1) Transport Canada should immediately establish Regulations governing the sport of parachuting under the Air Regulations. Such legislation should encompass licensing, certification, standardization of training, student testing, supervision, record-keeping, regulation of equipment, spot audits of all sport parachuting facilities and drop zones. Breaches of the Regulations should be liable to prosecution.
2) Transport Canada, in association with sport parachuting associations and enthusiasts should establish and enforce uniform teaching and methodology, standards and regulations to safeguard notice and student parachutists.
3) Transport Canada is the federal body delegated to investigate all aviation accidents. Parachute accidents are no less aviation accidents. The Transport Safety Board or a similar body with similar or the same investigative authority should investigate all accidents, incidents and/or malfunctions deemed worthy of investigation – including all parachuting fatalities.
4) Guidelines should be developed to establish a clear, consistent and competent investigation of all parachuting fatalities and near fatalities. The investigation should commence before the integrity of the accident scene before its integrity is compromised.
5) Parachutists should file with Transport Canada a detailed report of any significant accident, incident or malfunction for appropriate analysis, inspection and publication by Transport Canada. All instructors and/or drop zone operators should file a parallel report.
6) Only certified parachute riggers, trained to a specific standard, should be authorized to pack all main and reserve parachutes.
7) Because the history of sport parachuting has consistently revealed that the sport is inherently dangerous, particularly for beginner and novice parachutists, the first one or two jumps should be done in tandem with a seasoned instructor.
8) Students should be rigorously taught about the inherent dangers of the sport and, in particular should be carefully coached in the manner of handling parachute malfunctions in terms of recognizing a malfunction and then correctly implementing the procedures to successfully defuse such an occurrence.
9) All parachutists should wear an altimeter and student parachutists should be taught to recognize the point at which the reserve parachute can be properly deployed. Also, every parachutist should have, as part of the equipment, a fully functioning radio.
10) Fatality Inquiries should be called within a reasonable time after the death of a parachutist, as the passing of time clearly erodes and severely lessens the quality of the evidence, and in particular, the memories of the eyewitnesses.

No. of additional pages attached: 1

DATED _____,

at _____, Alberta.

_____
The Honourable W.N. Gilbert
A Judge of the Provincial Court of Alberta

DATED _____,

at _____, Alberta.

_____
The Honourable B.C. Stevenson
A Judge of the Provincial Court of Alberta