

## **FIRESTORM 2003 – PROVINCIAL REVIEW**

Public Meetings

***Kelowna***

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*Part B*

Our next speaker is Paul Runolfson. Okay, maybe Paul will come back. Next, Dick Fletcher of the Professional Engineers and Geoscientists of British Columbia. Hi Dick and welcome.

Dick Fletcher:

We are ready to go there, Mr. Chairman, Mr. Leach, Mr. Sproul. Thank you very much for affording us the opportunity to present today. I represent as past president of APEGBC – the Professional Engineers and Geoscientists of British Columbia – with me today are two of our members who have actually been intimately involved with the reactive work of the assessment of the post-firestorm conditions in the Kelowna area, and they have been dealing with the aspects of public safety of property below the fire.

They are: Don Dobson, P.Eng, with a practice here in Kelowna, Dobson Engineering and Tim Smith, a PGO who practices out of Vancouver West Rec Geotechnical. They are here as volunteers of our profession today to make this presentation. Also I believe somewhere in the crowd is Bruce Stevens, who is a counselor with ASTTBC, the Association of Technicians and Technologists of British Columbia.

Just by way of background, our membership of Professional Engineers and Geoscientists is over 19,000 in British Columbia. We exist under provincial legislation as you know, Mr. Filmon, the profession in Manitoba does, and our sole responsibility is the protection of the public of British Columbia. We have a pending merger with the Technologists of British Columbia who are some 8,000 strong which will actually bring us up to about 25,000 members with the same mandate in British Columbia.

Our profession has high practice standards, a code of ethics, and we are actually the backdrop for many of the de-regulation that the province has in place. We are actually in the pro-active and reactive interface of fire fighting or firestorms in this province. Our presentation today will focus mostly on the reactive side of things and, with a few comments on proactive. With that I would like to turn it over to my co-associates here to present, Don.

Don Dobson:

So we recognize that the issue of fires made up basically of three parts – first there is the prevention, reducing the risk to avoid having a fire in the first place. The second part of it is obviously the suppression part and then the third part is the recovery and the environmental assessment and hazard risk faced. And that is where we want to spend our time in the presentation this afternoon.

As Dick has said, we got involved, our members got involved in two parts in the reactive response in dealing with what happens after a fire has occurred and then we get into some of the proactive work with regard to building and planning in interface areas.

What we would like to go through with you today is the discussion with regards to the roles that our members play in the formation of a team to deal with the slope and hydrologic hazards that occur following a fire and we see that team as being comprised of our members that are professional engineers, geoscientists and soon to be technologists and technicians.

The key issues that we are confronted with, and I am sure you have heard this many times so far along your tour, is that following the fire we get a couple of major responses in the environment. One is the change in hydrology and the second is to do with terrain stability and involving erosion. Where we get involved specifically is in those cases where there may be firstly risk to human life and secondly property and then we also get involved as well in protection of the environment.

So the soil and water are the two main resources that are affected in the environment that cause down slope impacts, fires result in an increase in the likelihood of both slope and hydrologic hazards that occur after an area has been burned – particularly where there are moderate to high intensity fires as we experienced in the one here in Kelowna.

We've got slope hazards that are involved with shallow landslides, the potential for debris flows depending upon the slopes of the water courses and the increase in erosion in all forms including dry raveling and gullying and surface water. An example of the type of shallow failure that occurs when you lose root strength on a slope and that material goes into the water course below. An example of a debris flow where you get material washed downstream and infilling of channels inundating property, inundating houses and if there had been a dwelling in this particular area there would have been severe damage to it and possibly loss of life.

On the hydrologic side, on the water side, we got faced with increases in runoff and an increased likelihood of debris floods. The difference between a debris flow which is more a solid movement being moved by water and a

debris flood which is more water carrying finer sediments in it, we get both happening. We get floods as the result of loss of forest cover, changes in the frequency and magnitude, increased runoff and increased sedimentation. An example of a debris flood that occurred here in October and damaged a considerable amount of property following the fire, an example of a flood – one of the conditions which I don't think has been addressed in the past in fires we have had in the province and in the interior is the situations referred to as hydrophobic soils or water repellent solids. Basically this is a natural process that occurs in the environment but is increased as a result of the fire burning the organic material on the soil surface and a chemical reaction occurring that results in a waterproof layer being formed in the soil and resulting in water flowing on the surface rather than down through the soil. This may look like a 4X4 went up that slope, but actually that is sheet flow that has come down off the slope up above as a result of rain, a rain event, and there was no erosion on that slope it just simply washed the needles away – an indication of the degree of which this is an issue within the fire.

We also get reduced interception of rain and snow as a result of the loss of forest cover and in a number of the watersheds that have been burnt around the province this summer we have had total losses of forest cover and we can anticipate that we are going to see significant increases in peak flow. Some of the modeling that we have done in work that we have been doing on some of the fires suggest that typically where you have a snow generated peak, that peak is going to be increased in the neighbourhood of 40% as a result of the loss of forest cover – depending upon the extent of forest cover, particularly where we have an entire forest cover loss throughout the water shed.

The same thing with rain, the loss of evapotranspiration – if you look at what happens here in the valley, about 70% of our total annual precipitations is used by evapotranspiration and, when you lose that vegetation cover that water is then making it to the ground and if you've got water repellent soils on top of it, that's going in the runoff that is going down the stream and there is going to be some changes in the lower end of those streams, particularly where people live.

Just an example of some of the runoff that occurred in areas that are very dry – there was not a stream there prior to this event occurring – in October following the fire as you can see the entire vegetation, both from the crowns and on the ground has been lost. And, the same thing looking downstream. Actually that little gouge there in the foreground is over 3-1/2 meters deep. And that has not been disturbed since the glacier laid that material down 10,000 years ago. So, there have been some significant changes in this right above where people live in this particular community. But this can happen wherever you get into these conditions.

So what are the causes of these hazards? Well we get an increase in soil moisture as I have indicated as a result of the reduction in

evapotranspiration from the loss of forest cover and we get an increase in both the snow pack that arrives on the ground, there can be 30 to 50% water – snow water equivalent in the openings as a result of the loss of cover and also a faster melt rate. We are looking at an increased melt rate – it will be at least two weeks earlier. So we are shifting how the runoff comes and we may be looking at a synchronizing runoff that would be coming off on lower slopes with the runoff that is coming from upper slopes – so that also exacerbates the situation in the lower areas and puts people at risk.

So the risk that we deal with as I indicated at the outset – we start off with public safety, human lives are number one in everything that we do. Secondly it is private property and public property – there is always the issue of water quality, water quality for domestic supplies where we have community watersheds that may be damaged by fire. Further infrastructure throughout all of the infrastructure that is down below, whether it is hydro lines or whether it's roads, streets and so forth and of course the overall picture of the province to the environment and trying to put that back together.

So with that I will turn it over to Tim.

Tim Smith:

Thank you. We have told you that the sky could fall in. We have given you the signs behind the hazards and the question you would be asking is well are these hazards real. We were, Don and myself, were contracted by the City of Kelowna very soon after the fire to look at what the likelihood of these hazards occurring was, and should they be preparing for any down slope risks.

With a fire of this magnitude we were quite new at dealing with something this big. We had worked on smaller fires in the back drainage of nowhere, where the down slope risks really weren't that considerable. But when we looked at the Okanagan Mountain Park and the down slope risks, it was something quite new to Don and I. We did a lot of research into it and we found that the U.S. has a lot of history with down slope risks in the interface and so we started talking about some of the hazards and the risks that could be there. You know, we talked to some of the other local government agencies around the province about these hazards.

The question that kept coming back to us was well we have had forest fires before in interface settings, why haven't we had these hazards? It typically takes, like any hazard; a lot of things have to come together at once for it to occur. You have to have a fire of moderate to high severity to get the hydrophobic condition occurring. You need a rainfall event or a snow melt event and you need to have a significant down slope risk that could be impacted.

Well, unfortunately on October 22<sup>nd</sup> and 23<sup>rd</sup> of this year Kelowna did experience a rainfall event that deposited between 12 and 20 millimeters of rain on several of the burned watersheds during a 20 to 45 minute period. From those of us on the coast, 12 to 20 millimeters of rain doesn't really seem like a lot – but in this area the 12 to 20 mm in that time period, depending on where it was taken from was calculated to be anywhere from the 1 in 25 to the 1 in 200 year event, which is pretty substantial.

The storm was generally localized, it passed over the north east side of Bertram(?) Creek and it was centered directly of Lebanon(?) Creek and Rambler Creek and around the Jacksmith(?) Lake.

This rainfall event – well we had flood flows and we had debris floods being triggered. In addition to that, on Rambler Creek we had what is called an in-stream debris flow which initiated in a peat bog and it deposited debris up to 200 meters downstream. In addition, we had drainage structures and stream channels that were overtopped on Rambler and Lebanon Creeks by this rainfall. It impacted residences, hit orchards and impacted city infrastructure.

This picture is taken in the headwaters of Lebanon Creek and it gives you an idea of – it's quite a flat area, but the amount of rainfall that came in and caused the flood at this elevation – we were finding dirty watermarks up to

sixty centimeters up these trees in several cases on flat ground. Put that onto steep ground and you start getting much higher flows.

This is one of the residences that were impacted; I think it is at the intersection of Chute(?) Lake Road and Lakeshore Drive. Basically a lot of sediment was washed down across the roads and surrounded this house. That is the lake in the background. You can see the mud lines on the front and side of the house from this event.

This is looking to the north on Lakeshore Drive just down from the Lebanon Road crossing. The flow overtopped the stream channel at this location – some of it went through the culvert but the majority didn't. The culvert unfortunately was centered in the high part of the drainage crossing which meant that a lot of the flow went to the low side where the culvert wasn't. This flow went down the road and actually flooded several of the houses down there.

This is looking at the flow coming into one of the drainage structures on Rambler Creek. You can tell by the high water marks that it overtopped the drainage structure and also went down Chute Lake Road from here.

This is the type of debris that – this is again on the top of Lebanon Creek in the headwater areas. This gives you an idea of how intense the flow was in the headwater areas which are generally quite flat. That inlet to the culvert was free and clear prior to this event so it gives you an idea of the severity and the intensity of the flow that goes through just from that 12 to 20 mm of rain that dropped.

In addition, we got significant erosion deposition occurring in many of the existing stream channels. In many of the dry gullies we saw a flow where a flow never existed prior to it – perhaps immediate post-glaciation, but not in the last several hundred years anyway.

This is looking upstream on Lebanon Creek. That sediment that is there was moved from this event. We are looking at cobbles that are up to 600 mm in diameter so that gives some idea of how intense the flow was.

The flow lines that you are looking at, the mud lines – they are on the backs of the trees which give you an idea of how deep the flow was. On the front of the trees they are almost 2 meters high. On the back they are anywhere from ½ to 1 meter high.

This is a comparison picture – this is one of the dry gullies that on the left hand side gives you an idea of what it looked like before this event after the fire – on the right hand side it gives you an idea of the erosion that occurred because of this one event. It eroded into that area and gone away anywhere from 2-1/2 to 3 meters and this type of soil would be categorized as having very low erosion potential. And the type of flow that occurred moved cobbles

and gravels and eroded 2-1/2 to 3 meters deep in areas that didn't have any evidence of stream flow prior to this event.

This is some of the deposition that occurred off the Gerard(?) Mainline near the Thompson fire guard.

Okay, we told you about the hazards that can occur and did occur in the Okanagan Mountain Park. What are some of the recommendations that we as an association think should be looked at – first and foremost we think that while the fire is still being controlled an interdisciplinary team should be formed to conduct rapid assessments that look at the likelihood of these slope and hydrological hazards – and then also look at the risk to downstream, down slope resources associated with these hazards.

As I said beforehand, as part of our research into this project we did look at what was going on south of the border and the U.S. does have a team called the BAER team which is the Burned Area Emergency Area Response Team which is a combination – it's run by the U.S. Forest Service, it is a federal government funded team and it does have a combination of both government and consulting professionals in it who do look at these hazards and provide recommendations. We think that the provincial government should follow a similar model – whether that comes under the jurisdiction of the Ministry of Forests, PEP or WALLOP(?) that's something that should be looked at through the government. We feel that a structure should be developed for the team and a structure should be developed to help complete these hazard and risk analyses. It is important that the funding should be provided by the government. These studies are, like most things on a fire, they are not cheap to do and it is not fair I think to put it onto the individual home owner as a responsibility. The individual land owner generally doesn't have the funding, even the cities, and the type of money that is involved in doing these can be considerable. Kelowna and Regional District invested a lot of money in having myself and Don and the other professionals working on this in the Kelowna area.

The teams should work in cooperation with the fire command but it should be an independent entity with authority to direct rehabilitation measures. It should be made up of qualified professionals that come from both the government and the private sector and it is important that these teams be created in advance. I think Chief Zimmerman said in the last presentation that when the snow is falling is a good time to sit down and talk about these things. And I think that is a good time to sit down and say okay, we should divide the province up into regions and have these teams available to move ... tape over ... individuals that could be included in this would be professional foresters, professional biologists, and professional agrologists and my apologies to any other professionals who would be involved in that, but they are the three that came to mind.

When the team comes together and looks – you need to be looking at the current and the expected impacts and the expected impacts are the risks of these hazards and these must be identified. The team must account for what could happen during the next spring freshets and what could happen after the next major rain storm which is similar to what we had on October 22<sup>nd</sup>/23<sup>rd</sup>.

We should also project down the line and look at what is the impact of these hazards until hydrologic recovery is achieved. And typically in this area that would be somewhere in the 15 to 30 year period. And by hydrologic recovery we are talking to when the area would be very similar to what the area was like pre-fire with regards to the canopy, etc.

Where these hazards threaten public safety, property, and infrastructure and water quality, mitigation measures should be developed and implemented to minimize the potential threats and damage before another disaster occurs.

High risk situations require immediate action. These may include impacts to public safety, homes or other structures, roads and bridges. As we move down the risks it would include repairing areas, water supply systems would be a high risk, and critical forest resources would probably be lower risk. The mitigation measures could include providing protective ground cover on critically burned areas as quickly as possible. This could involve removing debris from within and adjacent to stream channels and it could also provide for other land and channel improvements such as deflection structures, increasing the size of culverts that may be necessary to prevent damage to structures that are threats to public safety.

In summary, our association members along with the other professionals would play a key role in identifying the post-fire hazards, the risks associated with these hazards, and would recommend measures to lower the risks and restore stability to the eco system. In that, I would hand it back to Dick.

Dick Fletcher:

Thanks Tim, I think it is highly appropriate that we have some real timely information to introduce to the record for these kinds of considerations. This is not pie in the sky. It wasn't the Yellowstone Fire, this was the east slopes of Kelowna.

I guess just moving to a synopsis, one other consideration that neither Tim nor Don mentioned, and that is that we are also living in a time of climate change and many of the items that are used by our professionals in making these predictions, etc., may not be the right tool or may not yield the right information because of those changes. And I think that we are moving into a time when we have to be responsive and more on top of these things, and there is probably a need for the province to also invest in better data gathering. If you look at what the American system is doing, they have moved very strongly into the area of remote monitoring weather stations, etc., to help them with post-fire management conditions. Of course these are again investments that have to be made recognizing the value that they represent to the people that are left that are impacted within the fire zone itself, or down slope. I think there is an important message to be taken forward on that one as well because as pointed out, the resources after all those investments are made during fighting the fire which appears to be quite broad-scales, can we say. Essentially the zipper goes on the purse after the emergency is over. The emergency being defined as putting the last spark out, or whatever you want with the fire, and there isn't anything essentially for these kinds of events – let alone what happens to people on their own personal property which Don mentioned at the outset of his presentation. You've got burned trees, your house may or may not be there. You have to rip down everything, you know all that sort of thing in your yard at your expense, or whatever, depending on what your insurance is.

I think there needs to be a holistic approach taken to looking at those things and coming up with practical ways of moving forward from these events.

That was a little off the slide. What we wanted to assure the panel and that would be carried forward is that we have the skilled people and the knowledge required to respond. Secondly as we were just discussing it is better to invest or there is more value in investing in prevention if we can, which will minimize the recovery requirements. Or members can be counted on for that expertise, it exists now. It is sitting here with me and there are other people in the province and people on the government side who have developed those abilities and need to be brought to the table.

Now this presentation has really focused on the reactive aspect and I would like to just mention also that there is the proactive side as well, and that was mentioned actually by the Mayor and Robert Hobson in their presentation for the City. And that is, carefully looking at the standards and policies that are in place now for living in the fire interface and development in the fire interface,

and the other tools that are required to properly manage it after people are going to live in those areas. Are there things that should be done. Are there things that should be recommended. How should these be followed up. We've got the members of course on both sides of that equation, on the consultancy side where they can stand back unfettered by regulation to look at new rules, but we also have what is called the municipal engineers division, who are engineers who work for municipalities, professional engineers and of course some municipalities also have geoscientists on board.

So we believe that as we have offered to government in the past that we would like to offer up our professionals as appropriate to help develop these policies because it is a lot easier for us, for our side of enforcement of good policies than it is ones where we haven't had our people engaged with their knowledge to help. I would like to, as mentioned earlier, echo the previous comments about assuring that the fiscal resources are there to do these things, because we are dealing with big areas. You, Mr. Filmon, not being from the province may not know, but it certainly – we have a big province and we have a shortage of resources to go and collect base data on many things. This is certainly no different than those, but perhaps we will need to be thinking about that.

So with that, Mr. Chairman, we conclude our remarks. Our contacts are there and read into the record and we thank you for the opportunity to make the presentation.

GF Thank you very much to the three of you. I appreciate a very comprehensive presentation and certainly in the whole area of recovery and the aftermath you have pointed out very clearly that there are so many things that have changed in the landscape as a result of all that destruction of the forest that there are going to be future consequences of that change in the landscape, and you have got some pretty graphic examples there that obviously have happened even in the couple of months since. So those are issue that I think you point out that the provincial government and local governments are going to have to look at doing the risk assessment and then deciding what their role is in terms of financing some of these recovery and restoration things for the landscape.

Thank you very much. We appreciate your presentation.

Earlier I called the name Paul Renolfson – is here? He indicated a desire to speak.

Okay we are going to be breaking for dinner and my only concern is if there is somebody who wanted to speak and isn't able to come back tonight, I would be prepared to stay later now and accept a presentation just to make it convenient for you. Is there anyone who would like to come forward because

they are not going to be able to be here tonight? If not then we will take a break until seven o'clock. We have a number of presentations scheduled for this evening but a little room if there are others who would also like to join in.

Thank you very much and we will see you at seven.

Good evening, ladies and gentlemen and for those of you who were here earlier today, welcome back, and for the newcomers, welcome. We have a number of people registered to present this evening and in addition if there are any of you who haven't registered but would like to appear and present, Andrew Yeow(?) is at the back of the room and he is taking registrations so you are welcome to give him your name and you would then be on the list.

I am joined by Don Leach and Jim Sproul, administrators of the commission and we are happy to hear your presentations. This afternoon there was just one person who didn't appear for the presentation – I am wondering if he is here, and if so we would accommodate him at the beginning – Paul Runolfson. No, then we will begin this evening with the first presentation from Joe Gordon:

Good evening, welcome.

Joe Gordon:

Mr. Filmon, members of the board, I thank you for the opportunity to speak to you tonight. My name is Joe Gordon. I am a resident of Kelowna. I have a particular interest in forest fires as I live in an area of Kelowna called McKinley Landing which is an interface area. I was a volunteer fireman in the McKinley area for six and a half years and had the privilege of serving the community so to speak in that sense and have been through basic forestry training, forest fire fighting, structural fire fighting, the usual rookie training and I have been to my share of calls in that regard. I am also a lawyer and I have actually in that sense been a member of the most hated and the most loved profession, having been both a lawyer and a fire fighter. But as a lawyer I have also been involved in litigation against the province of British Columbia where on behalf of a number of clients some years ago. I drafted pleadings, conducted discoveries, etc., and settled with the government in a case involving negligence in the fighting of a forest fire.

It is with that sort of background that I think I should tell you that I took a particular interest in what I was looking at and seeing personally on the day, Saturday morning, August 16<sup>th</sup>, 2003, when the Okanagan Mountain fire started. Before going any further though, I think I have to commend the Ministry of Forests for successfully fighting forest fires that I had seen previously. In the summer of 2002 in my neighbourhood lightning struck Blue Grouse Mountain which is across Lake Okanagan. I live on the same side of the lake as the Okanagan Mountain fire started, about 30 miles north – just within the city limits of Kelowna. And lightning struck in a hot part of the previous summer, not last summer but the previous summer, overnight during a lightning storm. In the morning wisps of smoke could be seen coming up the mountain, about three quarters of the way up the mountain. I wasn't home, but my son Peter actually noticed the flames and he called the forest fire fighters, the Ministry of Forests and within an hour a bird-dog plane was over the wisp of smoke and three choppers and they had it out in an hour. It was an area that was  $\frac{3}{4}$  of the way up the mountain, it wasn't accessible by any road. Nobody was up there – certainly nobody in the last 20, 30, 40, 50 or 100 years has been up there sweeping up the duff or cleaning up the forest floor. It wasn't a rocky face, probably similar in many respects to the ground conditions in the Okanagan Mountain fire and the Ministry of Forests in the middle of an afternoon had it out in an hour. It was gone and they are to be commended for that.

During 1994 as a result of a criminal act, I believe, a fire took place – a fire was set in Magic Estates which is a lake view subdivision next to my subdivision. The City of Kelowna, working with the Ministry of Forests put that fire out and you can still see the scars of the fire on this side of the lake when you go down the lake and look up. Again that fire could easily have become a disaster. If it had been allowed to spread it would have gone through Magic Estates, it would have gone through my subdivision and it brought to the attention of all of us the risks interface fires pose.

As a volunteer fire fighter at that time in fact with some jest we asked – we sought direction from the Ministry of Forests and determined as to how we should be reacting in these hot, hot summers and they basically said – look you should open your fire hall doors, you should sit in your fire truck, put on your turn out gear and get ready to go. Now they were jesting to a certain extent, but I am quite aware of how important it is to react quickly and be ready for fire in the right conditions.

Also during the Okanagan Mountain fire there were two fires that I am sure you heard about – there was a Gorman log fire that took place in August/September spontaneous combustion ignited a log in the Gorman Brothers plant during the month of September and between the air tankers and the Gorman employees and the west side volunteer fire fighters they got that fire out. The whole community observed a quick, instant, hard and fast attack and that fire almost got away but it didn't. And also there was the Peachland fire which took place during this whole period of time. It's tab 13 in the material before you. There was a fire on or about September 26<sup>th</sup> and the fire was contained just three hours after it broke out – it broke out across the lake from where the Okanagan Mountain fire broke out on a Thursday afternoon about 2:15 p.m. As this article indicates, 20 volunteers from the Summerland and Peachland fire departments were quickly on site. Those volunteers were in place at the start of the Okanagan Mountain fire but on this side of the lake. 20 volunteers quickly responded and with the assistance of the Peachland fire department and forestry crews and aircraft they had the fire out in three hours. Now in slightly difference circumstances, they did have hoses, they did have hydrants but the fire was – the homeowner was using a garden hose to keep it away and doing a very good job before they got there – a mere garden hose – which I simply point out.

So the Ministry of Forests is to be commended for working particularly with structural fire fighters and volunteers in this particular area. But this particular area is also prone to lightening strikes. There have been actually two, right across from where I live. The one I mentioned in 2002, and another one in 1995 – a lightening strike struck the same slope and ignited a fire but the rain put it out, just as the Wilson Landing fire department arrived to help put it out in that particular case.

So it is with that background and some interest in how quickly and how well fires are fought, as well as further interest in litigation that I will go into a little more a little later. I noted of course like everybody else did, that this province had been in a state of emergency since August 2<sup>nd</sup> 2003 because of the fire situation. Now that my understanding is that stage of emergency meant the government could focus its resources on fires among other things. And that is very limited – my understanding of what it meant. I also understood that it mean that the Fire Commissioner among others could control fire departments in other places and say I am going to make decisions now and I

am going to take charge – for what that is worth – I could be wrong in that regard.

On Saturday morning, August 16<sup>th</sup>, 2003 – prior to that day there had been several weather forecasts in Kelowna predicting lightening. The first prediction didn't take place. There was no lightening. But several days later they predicted it again. So we all knew – anybody listening to the weather knew that there was going to be a lightening storm. I saw lightening and heard thunder about 3:00 a.m. or so on Saturday morning, August 16<sup>th</sup> in Kelowna. I was at home in McKinley Landing. I was especially conscious of it because I had to get up at 5:30 that morning and take my son to a soccer tournament in Penticton and I was sleeping lightly – didn't want to miss the alarm clock – and I heard the thunder and saw the lightening. I was then up for sure with my son – fourteen year old son – at 6:05 to 6:10. I mention that because the sun was up at that point in time and it was fairly bright outside. You could see right across the lake, it was quite visible and we are just 30 miles away from where the other fire was. So, presumably the same weather conditions and the same light conditions were in place there.

The next morning I made a special note in fact that the sun came up at 5:30 in the morning. So the sun is up at 5:30 in the morning on both days. From 6:55 to 7:00 my son and I were driving through Peachland enroute to my son's soccer game in Penticton at King's Park. I noticed a small – and I would ask you to pay special attention to my description of what I saw, with respect – it was a small, thin, plume of smoke – a small, thin, but active plume of smoke on the east side of Lake Okanagan, on the south side of Rattlesnake Island. As we came on Drought(?) Hill in Westbank we could see the smoke in the distance. As we proceeded down Drought Hill past the Okanagan Connector to Peachland the radio – we were listening to 99.9 – reported there had been a lightening strike across from Peachland. The forestry was dealing with a small fire and the water bombers were expected later in the day. I think the radio also reported a Chute Lake fire that had been created as a result of the same storm, but I am not sure. As I recall, the same storm caused the Chute Lake fire. After we passed – if you are familiar with the area – the Brenda Mines turnoff I noticed a small fire truck parked facing the lake on the east side of highway 97. So the fire is over here, here's the lake, here's the highway I am driving on there is a fire truck facing the fire with one person in the fire truck. I recognized it as a Peachland volunteer fire department truck, one guy behind the wheel. There were people on the beach, approximately in front of the fire truck and a number of other lookie louie vehicles pulled over watching the fire across the lake – watching the thin, small plume of smoke. After we passed the fire truck in the area of the Oh-So-Good Restaurant, I had a clear view of the fire across the lake. It was approximately three football fields in size. That would be by my estimation about six acres. Now this is about 5 or 10 after seven. It looked like it was pretty well out – i.e., the closest ground – the part of the burned area closest to me was black and there wasn't a lot of flame or smoke visible from that edge of the fire. It looked like

a fire that had been put out on that edge of the thing. But there were four distinct hot spots, i.e. low flames at the north end of this area of the flame. It looked to me like nothing more than an active grass fire with four bonfires, or campfires at extreme northern edge. That's all it was. It at most a rank 1 fire, a smouldering ground or creeping surface fire as they are described, with the four hot spots constituting maybe a rank 2, which is known as a low vigor surface fire. It was definitely not up in any tree. It was definitely not crowning. It was definitely not high off the ground. There was plenty of room from the beach on the east side of the Okanagan to the west side of the fire and there were plenty of mountains left from the east side of the fire to the top of Okanagan Lake Mountain.

Now I don't recall much if any wind because the thin column of smoke was rising straight up, it wasn't leaning one way or the other. The fire was surprisingly close to the lake, very, very close to the lake. I noticed one helicopter near the south end of the blackened burned patch, but I didn't observe it dumping any water while I was looking at it. I couldn't see anyone on the ground near the fire and I could clearly see the fire and I am looking for orange jumpsuits. I am thinking the radio said the lightning strike was at 3:00 in the morning. This is now 7:00 in the morning. Four hours later, there is nobody over there. There is nobody on the ground by the fire. I couldn't see any hardhats, no orange jump suits, not even a boat on the beach. No visible people over there. The chopper was so low I thought it might be fanning the grass fire, and the scene reminded me of the descriptions of the start of a July 16, 1985 west fire which took place on the east side of the Kettle River near Westridge, B.C.

I just want to go there for a moment – a trial record involving that fire is here at tab 15. The west fire came to mind at that point in time and I had a sick feeling in my stomach when I saw what I thought was a helicopter fanning flames. Because if you turn to tab 15, page 5, the July 16, 1985 forest fire called the West Fire was ignited on Crown Land in the area that I described when lightning struck a snag on the face of a riser hill on the east side of the Kettle River near Westridge, B.C., around 2:00 to 3:00 in the afternoon. I am reading from page 6 there. It consisted initially solely of a smouldering dead tree or a snag lying on its sides – that's paragraph 10. A local fire marshal and I am going into this a little bit because I think there are analogies between what happened in the West Fire and what I was seeing across the lake in this fire. This suggested to me eventually that the Ministry of Forests didn't learn much from their previous experiences with this type of a situation. Because a local fire marshal for the Westridge area, in fact called Allan Chard(?) observed the lightning site and subsequent smouldering and reported it to a Ministry of Forests officer pursuant to Section 120 of the Forest Act. Chard had a crew of volunteers immediately available to him, familiar with the West Fire area and trained to control and extinguish fires. But he was instructed by the Ministry of Forests person not to make any effort to control and extinguish the fire because it is a forest fire. At 3:40 on that day, a second Westridge

resident called Merv Hanson who resided across the river and in site of the burning snag called forestry again and advised that he too was available to put the fire out. He had a crew of trained men with him, a service truck, was familiar with the area and he had equipment available to him capable of controlling and extinguishing the fire. They told him to stay away too, because they were going to send their rapid attack crews out from Penticton and he was to stay away from the fire because they would look after it. At all times, similar to the Okangan Fire which was right across the lake and in full view of hundreds, if not thousands of people, the site of the Westridge fire was accessible and it was open for people to see what was going on. In fact a private investigator we retained at the time took dozens of statements from people almost immediately and got the benefit of what they saw at that time.

A Crown suppression crew was sent to the West Fire area. It approached the area without any apparent equipment, or inadequate equipment to extinguish the fire. They then left, did not put the fire out. They returned the next day with a helicopter which hovered over the fire – and this is what tripped my memory – it dropped tools and equipment to the fire and then it hovered over the tree because it was still largely just one tree burning and the prop blew a branch down, which rolled down a hill and ignited the fire below the tree. This is in paragraph 19. That made the fire worse, and with the day old coals around that area it eventually ignited a forest fire that ultimately completely took off. The Ministry of Forests lit backfires without regard for prevailing winds. The backfires took off and the result was that the plaintiffs in the action lost their homes, lost their ranches, they lost their standing timber, they lost their merchantable timber and they lost a lot of things. Ultimately the Crown settled with them for a quarter million dollars or more. They didn't settle until the statements that were taken from people who saw the fire were compared and contrasted with the Ministry of Forests officer's notes, the fire bosses notes, and ultimately without the usual concession of liability the government basically admitted that the fire had not been fought properly.

With that view in mind, I am now watching a helicopter hovering over the Okanagan Mountain fire. He is not dropping any water – I should add that when we first came down Drought Hill and we were watching, my son noticed the lights of the helicopter and I said watch that helicopter because you should see him bucketing the fire – he has never seen that before. He watched and he watched and he watched – we never saw a bucket of water go on the fire at 7:00 in the morning.

My son asked me, when we saw the fire truck, why isn't the fire truck – why isn't the Peachland volunteer fire department going over there to fight the fire? I told him that they were probably being told by forestry to leave the fire alone as forestry usually fights forest fires. I said I didn't think the chopper was going to be able to do the job because the fire fighting didn't look very intense. There was no intensity about this scene. I said to my son that the Kelowna fire department and I am sure the Penticton fire department and

probably the Peachland fire department all had pumps and lines they could charge and run up and spray the fire down from either above or below. But I told my son that usually the problem with fighting forest fires is that there is usually no water – but as we could see, this was right beside a lake. There was an entire lake – 90 miles long and 2.5 on the average kilometers wide, within feet of the western edge of this fire. Surely, I said someone will drop a pump in that water. Someone will get water on that fire. And I described how the West Fire got out of control because, among other things, the initial fire fighters lacked the equipment to do the job.

Now I should also point out that the first thing in the material here in terms of how this fire started is an article from the Globe and Mail, dated August 23<sup>rd</sup>. I just wanted to go back to this because on the second page a Mr. Ron Gagnon of Summerland speaks of a growing sense of anger mixed with sadness and fear that he has about how this fire started. He says this should never have happened, he says as he stood on the waterfront near Naramata as five water bombers made pass after pass of the burning mountain. He says a buddy of mine reported this last Saturday, he said. He saw the tree go up in a lightening strike at 2:30, so it seems the fire really occurred at 2:30, not as the radio said, 3:00 a.m. and he says it should have been put out then. Water bombers did respond the next afternoon he said, hitting the blaze when, by his estimate it was less than 15 hectares in size. It was reduced to wisps of smoke but they left it. The wind came up and got it going again and this is what we got. Mr. Gagnon said another friend was camped on a beach immediately below where the lightening struck. He said the tree just went whoosh and the forest went up in flames.

I mentioned that I saw a helicopter there at seven in the morning. At tab 3 of this material is a press clipping from the daily courier, a fellow claiming to be the first pilot on the scene was interviewed? I think it is important to bring your attention to the fact that he says that the Penticton fellow was the first on the scene at the Garnet fire in 1994, he is the first to tackle the fire in Osoyoos earlier this year, and he was the first pilot to start working the Okanagan Mountain fire last week. He says he began dumping water, 120 imperial gallons at a time on the fire before being switched to flying those coordinating the fire fighting effort. I think this may be the fellow I saw. And, you will note he says he began dumping water and then he was switched to flying those coordinating the fire fighting effort – is that why he wasn't dumping water on the fire when I saw him? Was he taxiing the muck mucks around when he should have been putting water on the fire?

The next article in here is from another helicopter pilot – tab 4 in here – it is a letter to the editor called 'Flight from the sky at Okanagan Mountain'. It's written by a helicopter pilot. He says he accepted the position of operations manager for Wildcat Helicopters near the end of April this year. This is in the first column of the first page. In the second column, basically on the first page he talks about his history and background. If I can get you to turn to page 88

of Capital News that day, the second column, the second complete paragraph down he talks about the Osoyoos blaze which he says became something of a tourist attraction with people coming from far away to watch the Martin Mars water bombers perform their Herculean task. I just point that out because we know the Mars water bomber was being used the month before here in the Okanagan to fight the Osoyoos fire.

Later it became an issue whether there was a Martin Mars water bomber available at this time when I am watching no water being put on this fire, parked at the Penticton airport. This is some evidence there was a Martin Mars water bomber being used in this topography and geography just a month before. He talks about the Okanagan Mountain Park fire beginning early in the morning around the middle of August. He talks about it being fairly slow, etc. He says we had the first aircraft – this is in the third column – a Bell 212 on the fire sometime between six and seven that morning. He says when a fire is discovered an attempt is made to hit it very hard and very fast to keep it small and manageable. This is known as initial attack. The object is to keep the fire under a certain size, roughly four hectares so that available resources will be adequate to control, contain and extinguish it.

That's what should have been happening. That's not what was happening. That's not what I saw happening that morning when I went by. I want to point out though, that if you look at the fourth column over at the bottom, beginning with 'it is amazing' he says it is amazing what one helicopter can accomplish. If the conditions allow with just the ubiquitous bambi bucket – the bucket that we run on our helicopters cost well in excess of \$10,000 and fit into a large duffel bag, roughly the size of a big hockey bag. It holds 350 imperial gallons of water – so a full bucket of water, plus the weight of the bucket and long line places close to 4,000 pounds, or 800 kilograms on the hook of the helicopter. And this is a point I didn't appreciate, and that I think you need to perhaps consider. It's new to me, but perhaps not to you. He says that water can be delivered with near pinpoint accuracy. When a pilot has a water source close to the fire, and those choppers had a water source within feet of the fire. They had a whole lake. He says he can drop a load about one every two to three minutes. Now I drove from Drought Hill to Peachland and stopped and looked and took a good 15 minutes to get through that valley and I didn't see a single bucket of water go on that fire. And this guy says when they are close to water they can drop them every two to three minutes. He says over the space of a day often a helicopter, depending on the size, can put more water on the fire than a water bomber or a tanker at a lower cost per litre, coupled with the capability to hit an individual tree or hot spot, the helicopter becomes an indispensable tool for fighting forest fires.

The first guy at the fire gets called off to run taxi service. Were there other helicopters there? I haven't seen a photo of the fire being fought that early in the morning. The earliest one I have seen is 8:30 in the morning and there is one helicopter in that picture. But I digress.

I was concerned about this helicopter not dropping water, I was concerned about this helicopter fanning across the grass fire. I told my son that Peachland probably wasn't being allowed to go over and fight the fire – for what its worth. I wondered why a mere lightening strike had not yet been attacked by the rapid attack crew. I wondered if they would try to ferry people over from Peachland, despite the fact that rapid attack crews can repel down from the choppers and get to such a fire much more quickly than boaters could reach the fire. It seemed to me from the gathering of people on the beach that they were going to ferry people over in boats. The fire was four hours old. In fact it was older than that if we accept that the lightning struck at 2:15 and nobody was fighting it that I could see. Maybe it was being fought before I got there and later some of the press releases suggested they were. But I have reasons to be skeptical about what they have to say.

I became alarmed and angry about what could happen to Okanagan Mountain Park if they didn't get on it. They had to get on it. I've been to fires where you move – the first 10-15 minutes is critical. Nobody is moving on this fire. I wondered myself what would happen if the fire had been on my side of the lake. I suspect the fire would have long been out if it was on the west side of the lake. And I have shown you a newspaper article where in the next month Peachland did get a fire out very, very quickly.

Okanagan Mountain Park was very dry. I had been down there a week earlier in a boat. I knew it was dry and if I knew dry I'm sure everybody at Peachland knew it was dry. The terrain over there was no steeper than McKinley Landing where I live, where it is not impossible to drop pumps in the water and run lines uphill. Later I noticed that at least two homes on the lake were subsequently saved, at least in part by homeowners using pumps and lines from the lake, from a much greater wall of flame than those fire fighters were facing at 7:00 in the morning on Saturday.

I explained to my son that to fight a forest fire, the fire fighters have to use modified axes and awls to scrape the bedrock to set up fire guards and are often only equipped with squirt guns to fight the flames. But in this case Lake Okanagan is right there and there was ample water supply. I explained to my son that the Ministry of Forests in my opinion have a mental block sometimes about using water – that it simply isn't part of their repertoire of tools to automatically think of using a water, given the pattern of attack that they normally use.

It occurred to me that the Kelowna fire department and probably the Penticton fire department were only one hour away and they have zodiacs, men, equipment and pumps, plenty of volunteers and professional full time fire fighters. But again, I didn't think they were actually going to be called in. I almost pulled over and phoned Kelowna Dispatch because I felt the fire was not being attacked properly. But we had a soccer game to get to. I assumed

forestry would pull out all the stops, not only because of the importance of the south slopes to the lake view of much of Peachland, but also because a state of emergency had been declared on August 2<sup>nd</sup>, 2003.

At most I have to emphasize the fire seemed to be in grass to medium brush – even if you could call it heavy brush, the general guidelines with the fire lines 9’ in grass or 1 to 2’ merril(?) soil, seem quite doable. And in my material here I have attached a copy of guidelines for – it’s tab 21 – it’s taken from the B.C. Ombudsman’s report on the Silver Creek Fire Review – page 65 from that report. For the medium – even if you call it heavy brush that I saw over there – this is tab 21 – looking at what I was looking at, if you had to go over there with a crew and put a fire line down the recommended width would only be nine feet, and it wasn’t deep brush it was medium brush in my view. And when you got it down to mineral feet that would be one to two feet. That was quite doable at that point in time, but the fire had nobody on it.

I had a very negative gut feeling and a sense of alarm about the lack of emergency and the lack of any aggressive attack on the fire the entire time we observed the goings on, from the time the smoke came into view at the top of Drought Hill to the time we left.

I discussed my impression with other parents from Kelowna traveling to the soccer game and everyone I spoke to found the lack of intensity very puzzling. I should point out that when we arrived in Penticton, and my son’s game started at eight o’clock – we arrived at approximately 7:25 – two white ConAire water bombers with retardant lumbered noisily overhead on their way from the Penticton airport in the direction of the Peachland fire – i.e. they headed north. I thought good they are going to fight this fire. But the first one didn’t leave until around 8:30 or 9:00 o’clock in the morning. The second one seemed to leave about half an hour later. Now I returned to the field and I was there for the second – in between 11 and 1:00 – no water bombers flew over – no ConAire water bombers flew over, and I don’t remember any others passing overhead during that day which I thought was odd. Then I thought well maybe they got that little fire out. Later I read in the week of November 30<sup>th</sup>, 2003 in the Kelowna Courier that the Ministry of Forests ordered thousands and thousands of retardant that day – on August 15<sup>th</sup>, 2003. Did they run out of retardant? In Salmon Arm the tankers were grounded for several hours on one occasion in the Silver Creek fire because they ran out of gas. Was there a problem with retardant? I also read that two planes were used on the Chute Lake fire. I think those two planes might have gone to the Chute Lake fire.

I remember thinking they must have the Peachland fire under control or surely more planes would be taking off and landing. Now at 2:30 p.m. that day my son and I drove by Peachland again on the way home. We drove very slowly, there were many cars were parked on the road and progress was slow. There were twenty or more boats in the lake as well. We pulled over and had another close look. The fire was out of control. To my astonishment we saw

three Quebec as I call them water bombers – not white ones. The fire was at least ten times larger than when we saw it in the morning. I don't know where the yellow water bombers came from, they certainly didn't fly over our heads when we were in Penticton and where did the white retardant ones go. I looked very carefully, but I saw no white water bombers fighting the fire at 2:30 p.m. I also saw no trace of red retardant near the fire. A week later I went back and I could see traces of red retardant near the source of the fire, but when we went by at 2:30 I didn't see any retardant around the fire.

Throughout the day the news reports from the radio seemed to understate the severity of the fire we saw at 2:30.

At 6:30 we passed by the fire again on the way back to Penticton for an evening game. The fire was even larger, having burned past Rattle Snake Island on its way north. Yellow water bombers were landing on the lake and taking off and now they were working. Now they were incredibly impressive. In the time that we got from Drought Hill to up the hill from Summerland, we saw two planes, each land twice and dump twice. Now there was intensity. Now there was an attitude. Now they were aggressively attacking this fire.

I personally saw at least four dropped in not very much time. The bomber that we saw were concentrating on a 'V' shaped ravine at the south edge of the fire by Squaley(?) Point. The fires seemed to have to go through a ravine next to Squaley Point in order to spread south. I thought it was clever of the pilots to be concentrating on the ravine, sort of classically heading them off at the pass. The flames going south towards Naramata had not gone up on the hill yet. They had reached the point – and I need to emphasize they are going through a ravine, a perfect place to cut off a ground fire – however the planes had to stay at such height to avoid clipping the sides of the ravine that the water was just dissipating into useless vapour before it hit the flames.

This was now 6:30 a night. Now they had been there since 7:30 in the morning. 7:30 in the morning to 6:30 at night is plenty of time to set a pump and a generator up and pump water into a ravine like that. That flame was not a class 4 or 5 flame going into that ravine; it was a creeping grass fire. That I believe is the flame that got away and endangered Naramata. It went through a ravine. An example of the crews on the ground in my view not being equipped with basic pumps and generators sufficient to do their job – this was now 6:30 p.m.

At 11:30 p.m. my son and I passed by Peachland again. The fire was completely out of control, well past Rattle Snake Island. The flames were highly visible at night and there were cars all over the road watching it. The radio indicated that the water bombers had ceased flying for the night. I told my son the forest fighters quit when it gets dark – who knew what was going to happen during the night.

Later I talked to three Peachland volunteer fire fighters during the Terry Fox Run on September 21<sup>st</sup>, 2003 in Kelowna. They said they had been called out of Peachland to fight the fires in Kelowna after Saturday, August 16<sup>th</sup>, 2003. So it can't be said that the Peachland volunteer fire department had to stay in Peachland at all times. The grass fire I saw at 7:00 a.m. on August 16<sup>th</sup>, 2003 was a lot closer to Peachland at that time than any fire they had been sent out of Peachland to fight in Kelowna was.

Approximately ten days later I had a conversation with retired Kelowna city fireman – he had been a fireman for 30 to 40 years – he was camping right across the lake in the Summerland area from this fire on August 16<sup>th</sup>. He ...

(Tape 4)

... now that he is retired, this is a fireman who knows what he is talking about. This is an expert as far as I am concerned. Subsequently I also spoke with a former volunteer fireman in Peachland. He lives right across the lake on the water in Peachland and he was there when this fire took place.

I am going to show you – he said he read my comments in the paper after – and he said that he agreed with me that there was no intensity about the initial fire attack. He also said the water bombers left before the fire was out. He said that all the locals know about the afternoon winds in the area which blow up-slope, off the lake from the west, similar to the McKinley afternoon winds we have in my neighbourhood in late afternoon. As volunteer fire fighters in McKinley we were always told if you get a fire on the slops in McKinley you have to get it out before the evening winds kick up because once those evening winds come up off the lake, it's gone. It's going to push it right up over the hill.

So, everyone in the Okanagan knows about these evening winds. These water bombers quit before the evening winds came up. The wind direction actually changes and intensifies and is so strong that in my neighbourhood the kids go down at night and jump in the lake because it generates large waves that they can body surf on. That's how well-known the wind is.

A couple of days after this happened, I happened to be speaking to a reporter here in Kelowna who asked me if I knew anybody who had seen the start of the fire. I told them what I told you. And you have at tab 5 the article – it's entitled witnesses critical of how fire was fought. It says 'fire crews could have knocked down the Okanagan Mountain fire on the day it started if the forestry ministry had been more organized say witnesses. Bob Campbell, a retired airline pilot saw a lightning bolt hit the park at 2:15 a.m. – this is tab 5 – Saturday from his home across Okanagan Lake in Summerland. When he awoke at 6:00 a.m. a helicopter with a bucket was dumping water on the burning trees. Four hours later three water bombers arrived. The fire was still reasonably small, the water bombers contained the blaze and left around 11. and they didn't come back until 4, Campbell said. Other aircraft dumped fire retardant on the perimeter of the blaze. The fire went out of control about one

p.m., but no water bombers flew here to fight it. A friend told Campbell he saw three aircraft parked on the tarmac at Penticton airport. They, the pilots probably needed to crew rest but they can't fly at night anyway said Campbell. Campbell says if the forest ministry had kept the water bombers in the area another hour on Saturday, the fire would have been out and controlled.'

On the next page they quoted my comments – they describe me driving through Peachland at 7:00, the fire site was three football fields, four hot spots, one helicopter in the are. I am critical how this was handled. When I drove by again at 2:30 things had just exploded. I don't understand why they didn't drop pumps into the water, run a hose up the hill and flood it. I am not really impressed that they couldn't control that itty bitty fire.'

That evoked a response from the Ministry of Forests which is good because I want to compare it with some other public announcements that they made. Because they said Ministry officials quoted say they dispatched – you notice they say 'dispatched' just dispatched – so it isn't clear when they arrived, two helitack crews to the fire scene as early as possible. It doesn't say when – just dispatched and as early as possible. Said spokesman Bryan Brown the site was about ten hectares by the time they got there about 7:00 a.m. I say it was no more than six, incidentally. Two fire warden crews of four to six people each ferried to the park soon afterwards. Notice that – two fire warden crews of four to six means they are either talking eight people or twelve people if my arithmetic is correct. I have never been very good at arithmetic, but we are just talking eight to twelve people, are we not? He says putting pumps up from the lake with hoses would have taken hours. Well they had hours! They had from 7:45 in the morning until 6:30 at night to put pumps up to prevent the southward spread of that fire and they had until 1:00 o'clock in the afternoon before they lost control of it, to stop the northward spread of that fire. But he says it would have taken hours and 'wouldn't have changed it whatsoever.' And he says to get up to the top end of the fire would take hours if not days. And I say that is nonsense as well. He says air tankers were blasting the fire on Saturday with water and retardant. Brown said the three water scoopers on loan from Quebec flew in elsewhere from B.C. He says as soon as they knocked it back to a smouldering ground fire they traveled to a blaze elsewhere in the interior. He says there are so many large fires right now they are flying constantly said fire zone manager Jim Mottishaw(?) who was in charge of the fire fighting effort.

Then they say no one could explain the grounded air tankers in Penticton. Now Penticton is what? A five-minute flight away? I am in Penticton. I see two air tankers fly over my head the whole day that I am in Penticton except for the part when I am in Kelowna, but that morning when it was critical to attack the fire there are three air tankers at the Penticton airport that are not flying.

Now, this article says two retardant aircraft were busy knocking down a smaller fire at Chute Lake – that's why I suggested the two that I saw probably

went to Chute Lake which was an easier blaze to fight because crews and heavy equipment could get there. Not that he says 'by 2:30 p.m. winds had fanned the Okanagan Mountain Fire to 15 hectares.' The Ministry of Forests changed their tune on that in their later press releases but at this point in time they are saying by 2:30 winds had fanned the Okanagan Mountain fire to 15 hectares. The flame breached the helipad that crews had set up, forcing them to relocate. Then they say the call went out for the return of the air tankers. I think you will find later they called the air tankers in at 1:00 p.m. but here they are saying it was – they seem to be saying to the reporters they called them in at 2:30, which were busy fighting other fires. Yes, he says, I wish people could see how deep it is burning, how dry it is, how hard those guys are working. Yeah, it wasn't burning very deep, it wasn't – and they weren't working very hard when I saw them – and they didn't arrive on the scene until 7:45. What should have been happening between 7 and 7:45 was that fire should have been put out.

He says that putting crews on the ground to lay hose and set up relay tanks in the middle of the fire zone would have been impractical and dangerous. Well I guess this isn't the kind of hearing where that is going to be determined, but it might have prevented a wall of flame from hitting Kelowna and it might have been a little more practical. He says the fire was much too intense. It wasn't too intense at 7:00 in the morning. It wasn't too intense at 8:30 in the morning.

Gordon wonders why the Ministry failed to call in Kelowna or Penticton fire fighters to help out with their pumps and boats, for what that's worth.

Now the next article in here, because it was quite an issue locally about these air tankers in Penticton that are not being used. This is article number 6 and it seems to be a tacit admission that the Ministry of Forests left three water bombers grounded at Penticton Airport. It is the Kelowna Daily Courier, August 21<sup>st</sup> – titled Ministry choosing to use better bombers – Hawkins. The forest ministry left three water bombers grounded at Penticton airport as the forest fire spread on Okanagan Mountain because it had better aircraft available? Says Cindy Hawkins, the Kelowna MLA reacting to criticism over the way officials handled the fire on its first day said the Ministry decided against using the Mars bombers because it preferred to use three CL415 aircraft instead. The aircraft are specially designed to fight fires. Okay, that's fine. But, in retrospect, what better bomber could have been used at 7:00 o'clock in the morning, or at dawn, at 5:30 in the morning than a Mars water bomber which had been used in the Osoyoos fire here in the Okanagan a month earlier and which was used in much steeper valley fire fighting during the Silver Creek fires in Salmon Arm in 1999.

I want just to refer you to Tabs 7, 8 and 9 – which are the subsequent information released by the Ministry of Forests – you know being very concerned, being very angry, I looked very keenly at what the Ministry of

Forests' explanation was thinking surely this isn't being botched as badly as I think it is being botched. What are they officially saying – the next article is Pete McMartin of the Vancouver Sun wrote a column and he talks about Kelowna being engaged in what one local reporter called a tyranny of thankfulness with every billboard gushing about our fire fighter heroes – and I want to say this – I have nothing but praise for the Kelowna fire department and for the Kelowna actions – nothing but praise and admiration for their courage and skill. My criticism is addressed to the Ministry of Forests. Not everybody in Kelowna distinguishes between Kelowna fire fighters and the Ministry of Forests. As Martin says, this was a local disaster that came very close to being a provincial catastrophe. As you know, 248 families lost their homes. And yet, as he says on the next page – one crucial question has yet to be answered – could all of this have been prevented?

According to Steve Bachop, a fire information officer in Victoria, the records show that the fire was first spotted at 2:05 a.m. August 16<sup>th</sup>. By 3:25 it was estimated as being 10 hectares in size. By early morning light it was burning at a rank 4 level with sporadic crown fires and by 6:18 a.m. when the first helicopter bucketing began it had grown to rank 5.

Now let me stop you there for a second. They call it a rank 5. If you turn to tab 10, tab ten is a fire index which was in the Vancouver Sun. A rank 5 fire is extremely vigorous with tree top flames traveling up to 50 meters a minute. If that fire was a rank 5 fire, at 6:18 in the morning it would have been half-way to Kelowna by two hours or by the time the ground people arrived. I doubt it. And what I saw was certainly not a ground 3, a ground four and sure as heck not a ground 5 fire – rank 6 is the worst. Nevertheless, they maintain at 6:18 it was burning when the first helicopter bucketing began and you will notice that this article says 6:18 – what happened to Mr. Brown saying the first helitack crews were first dispatched at 7:00? It had grown to rank 5; the highest level is rank 6. He says at 7:47 a.m. the first attack crew of 26 fire fighters arrived on the scene. Well, I thought Mr. Brown said there were between 8 to 12 on the scene. When did 8 to 12 become 26? And he says, between 9, 10 and 11:45 the air tankers were called in to aid their efforts. This, they seemed to do. The planes dropped 39 loads of water in those 2-1/2 hours, cooling the fire to rank 2. But then the decision was made to deploy the tankers on fires elsewhere. The fire roared back to life, frustrating any efforts of the ground crews to contain it. By 1:00 p.m. the fire was again burning at a rank 5 level. The tankers were recalled at 1:15 p.m. Well, Mr. Brown indicated they recalled them at 2:30 p.m. So, who do you believe? Bachop from Victoria, or Brown who is at the scene at the time. And they dropped twenty loads of fire retardant then. But by 2:00 p.m. it's burning right through the fire retardant. As Bachop says, that's pretty abnormal for us. At 1:50 p.m. a request was put in for the big Martin water bombers – a request that was denied. Instead, Loughheed tankers were deployed to drop fire retardant.

The next piece of news to come out is Tab 8 in here – which is an article by Ron Seimer(?) of the Daily Courier and he is interviewing information officer Ken Matuga(?). Brown is no longer talking to the media it seems about this fire. There is a new information officer, Matuga, and he says if the Martin's water aircraft had been sent up from the coast it might have been able to dump at most another 350,000 litres of water on the fire. Well first of all, it's not at the coast, I thought it was in Penticton. It had been in Penticton fighting the Osoyoos fire – who says it's at the coast? And secondly, he says it would have been able to dump 350,000 litres of water – well that could have been critical at 7:00 in the morning. That might have totally extinguished those four little campfires that I saw and the smouldering grass fire.

He says we made the most efficient use of resources we had available at the time. Well, that sounds like lawyers talking. And he says other considerations involving the decision on whether to use the Martin water bombers include flying conditions, the safety of ground crews and the need to protect other fire threatened areas.

Flying conditions were perfect at 7:00 o'clock in the morning. There was no ground crew on there from 2:00 in the morning until 7:45, so there is nobody on the ground to worry about dumping water on. And, there was a need to protect other fire-threatened areas like Kelowna and Naramata.

He then goes through in that article, the same litany of official records that Bachop from Victoria had given the Vancouver Sun. The only difference is that on the next page where it says 'forest fire continued from page A1' he says that the giant planes had to be kept at the coast. Now I don't know for sure if they were in Penticton or if they were at the coast, but it seems pretty clear from Cindy Hawkins' response in the paper that they were in Penticton. So why was he talking about them having to come from the Coast. He talks about – on that page I want you to note that the Ministry hadn't calculated the amount of water dropped from bucket equipped helicopters.

Tab 9 – I should say tab 8 in here basically is the same summary and tab 9 however is the same Mr. Matuga being interviewed by Marshall Jones staff report with the Capital News, talking about the same things. If you look at the second page he says that fires were burning the same way at 1:00 p.m. as we saw at 3:00 a.m. Well, does that mean at three in the morning they were dealing with rank 5 fires? – because they claim that at 1:00 p.m. they had to call in the tankers again because it was back to rank 5. So they seem to be pushing back the time that fire hit rank 5. If it truly was a rank 5, why was it a mere 6 acre burn that I saw at 7:00 o'clock in the morning? He says even at that time of the morning the fire was moving in a rank 4 or 5, unheard of he says for a new fire started at night. He says air crews cannot work at night. So all they could do was make a plan for the morning. Okay, that's fine; I understand air crews can't work at night – that's what they say.

He says that by 3:25 they knew the fire was already ten hectares and growing quickly and then he is quoted as saying by 4:38 a.m. they had aircrews working the fire. But the sun didn't come up 'til 5:30. He just finished saying the air crews can't work at night and now he is telling the public that they did have air crews working at night at 4:38 in the morning.

It seemed that the more press released we got from the Ministry of Forests the earlier they got on the fire, the more people they put on the fire. I am reminded of when people ask me what I was like as a hockey player – the older I get the better I used to be.

He says giant Martin water bombers wouldn't have made much difference. Well why did their fire boss call for one? Was he incompetent? Is he contradicting his own fire boss? He says because water disperses before it hits the ground. And he says by around 11:00 a.m. the tankers did their job of cooling off the fire with 1.26 million litres of water and 219,000 litres of retardant. Look at that – by 11:00 a.m. he seems to be saying they dropped 1.26 million litres of water in 39 loads? Are you trying to tell me that 39 loads from those yellow planes – if you added them all up that would come out to 1.26 million litres of water? I doubt it.

Consequently I lost faith in the accuracy of the information that was being produced to the public about how this fire was being fought. It confirmed my suspicion that a full-fledged inquiry of some sort needed to be made and so I am grateful for this opportunity to speak to you. This fire has wreaked havoc in this community. I know they can do things right, but they didn't do things right here.

You have in tab 12 an article by Vaughn Palmer of the Vancouver Sun calling for this type of a recommendation, and saying it would be preferable to have a full fledged inquiry overseen by a judge or an independent expert. Because I know from dealing with Forestry in litigation, unless they are under oath and they produce their documents, their fire logs, their incident reports, that it is difficult to get to credible information.

I attack – attach – probably doing both – an article – Tab 14 in here which was a comment made by John Slater before you recently. I note that he says that because of liability issues fire fighters need permission from the Ministry of Forests and the British Columbia Fire Commissioner's office before they can fight fires in other jurisdictions. In Osoyoos they got that in thirteen minutes, apparently if I understand the article correctly.

The remaining attachments to this material basically excerpts from the Silver Creek Fire Review, where many of the same complaints were made by the public and were dealt with by the Ombudsman after examining a number of reports. It might be of some interest to you. I am not going to belabor them now, but between the West Ridge fire that I was involved in and the type of

complaints the public made here, it seems to me the Ministry of Forests isn't learning anything from these experiences.

Before I summarize though, I just want to show you the only picture I have been able to find of August of the day of the fire – it was taken at 10:00 o'clock by a guy called Joe Lagord's Upholstery. This is 10:00 in the morning. This is not 7:00 in the morning. That's my original and I need it back. If I may, I'll make copies for you and leave them with you later. But that fire is 2/3 larger in terms of smoke plume than the smoke I saw. Now look at that fire. that's at 10:00 o'clock in the morning. The water tankers arrived at 9:10 and they worked until 11:45. That's approximately right in the middle of the water bombing – the application of the 39 loads. It's hard to understand why they couldn't put that out. And that fire is bigger than the fire that I saw, but it just captures graphically that – we are used to thinking now of a wall of flame roaring out of the hills. That fire did not start like that and the initial fire attacks seem to have been reasonably successful based on that picture itself.

The problem is the initial fire attack wasn't intense enough and it wasn't quick enough. This fire is reported at 2:15 to 2:30, the sun is up at 5:30, there has been no attack on it. No crews are there on the ground until 7:45 and yes, Ministry of Forests is going to say you need crews on the ground to make sure the fire goes out.

Helitack is not dispatched until 7:00 a.m., according to Brown. No tankers arrived until 9:10 or 10:00 a.m. if Mr. Campbell who is the retired pilot is correct. He said they didn't get there until ten.

The Ministry of Forests – I just want to conclude by saying their usual biggest problem is a lack of water. This fire started small, beside the beach, beside a 90 mile long lake two to three kilometers wide and it burned north and south on that lake for how many miles? – miles and miles and miles to Kelowna and Naramata. Put the wet stuff on the red stuff – basic fire fighting. They had lots of wet stuff and they didn't start off with a lot of red stuff. Never mind the million dollar a day planes from Quebec. Where were the pumps and the simple generators, volunteer and professional structural fire fighters used to pump water? Yes, even uphill. Given that they had sun-up at 5:30 in the morning, they had from the time the ground crew arrived at 7:47 to go to work, they had to 6:30 at night to prevent the southward spread of those flames. And they had until 11:45 when the tankers dropped the last of the 39 loads and took off. And that smoke you can see in that picture isn't very scary looking.

Simple pump technology saved at least two lakeshore homes with other resources as well from far greater walls of flame than the initial attack crew saw. The Ministry of Forests needs to change their policies and procedures to use in this province of lakes and forests, the lakes on the forests. And my own

personal experience is we get a lot of lightening strike on the lakes, on the hills closest to the lakes.

Secondly, the Ministry of Forests policy of not working at night may work for them, but this fire started across the lake from trained, equipped volunteer fire fighting crews in both Peachland and Summerland, all of whom are on standby with pagers, shovels, pumps, mattocks, grub hose, boats and access to backup from the Kelowna and Penticton fire departments, who do work at night. Almost every call I went to was at night. We are in a state of emergency. Theoretically the Fire Commissioner can erase boundaries and work towards seamless fire response. Who is in charge? Why are they waiting for the sun to come up? There is not Workers' Compensation Problem like Salmon Arm had, the people in Salmon Arm complained that there were trained contractors closer to those fires who could have got there before the Ministry of Forests and the Ombudsman said yeah, but they are not covered under Workers' Comp and the coroner's report says don't use those kind of people.

You don't have that kind of problem when you've got trained fire departments right across the lake from the fire. There is no problem with the coroner report saying don't use civilians. Osoyoos fire fighters got permission as you have seen within thirteen minutes of asking for it from the Ministry of Forests and the British Columbia Fire Commissioner's office. Why didn't that happen here? And it wouldn't have been a new idea because obviously it had happened in July, the month before. In Osoyoos they turned out 350 people, ten helicopters and a Martin Mars water bomber and contained a very rapidly spreading uphill fire. That doesn't sound to me that it was any easier to put out, or about the same as this Okanagan Mountain fire.

I was criticized for suggesting this earlier by people saying well nobody would pull the Peachland fire fighters out of their town that would leave that town defenseless. But they were pulled out of their town and sent to Kelowna to fight the fire along with 144 other fire departments from across the province and from out of the province.

The third problem that we have here is it seems that fires which start, or flare up between 9:00 and 5:00, Monday to Friday get looked after. The one across from my house got three choppers and a bird dog plane right away – similar terrain if not identical and it was out quickly. It attracted an intense quick first response and got fought hard and fast. The attack kept it small and manageable and it got put out. Is there a systemic problem with fires despite a so-called state of emergency which starts slightly outside of municipal boundaries – on weekends, at night, in the Interior? Do these fires make up a disproportionate percentage of the fires the Ministry of Forests doesn't control? Is this because Victoria bureaucrats are still asleep. Is this because the Ministry of Forests prefers not to fight fires in the early morning or the late evenings and usually won't let other people fight them?

For example, on tab 20, page 44 of the Silver Creek fire review when a criticism raised by people observing the fire suppression efforts was that there did not appear to be sufficient air resources and that the water bombers were not working at daybreak. The Ministry of Forests' position on this was "the Ministry of Forests has explained that weather conditions make flying in the morning and late evening both unproductive and very difficult.' So they don't want to fight in the morning and they don't want to fight at night, so let other people fight these fires until they get there. Because they all need to work as a team to put these fires out.

Fourth, the bottom line is they left too soon. After losing opportunity after opportunity to put that fire out, they lost control twice. Even if you accept it was a rank 5 or a rank 6 fire at 6:18 – even if you accept that, give that to them – they obviously had it out by 7:00 when I saw it. It was no more than a grass fire at that point in time and they obviously wouldn't dispatch their own ground crews if they felt that at 7:45 it was still a rank 5 or rank 6 fire. So they dispatched their own helitack crews, their own ground crews, and then it's fought in such a way that it flares again after 7:00 o'clock. They beat it down, they call in the air tanker support, and then they lose control of it at either 1:15 or 2:20, depending on which press release you want to accept.

They left too soon twice. They lost this fire twice. Leaving too soon is the height of fire fighting negligence. It's like leaving a house before making sure the fire is out or going to a chimney fire and putting it out and leaving, and being embarrassed by having the fire come back to life under some eave you forgot to look at, tear apart or inspect.

The winds, everybody in the Okanagan knows about the afternoon winds. You don't leave a fire on the shoreline of Lake Okanagan in the late afternoon. You've got to put that fire out. Who sent those air tankers away, and what was more important at that time of day than the Lake Okanagan fire with the winds changing.

It is unacceptable that the fire did the damage it did. You have heard again and again, we have lost – 230 or more families are out of their homes this Christmas. Businesses have been ruined. The trestles are destroyed – most of them. It has ruined Okanagan Mountain Park; it's caused the biggest peace-time evacuation of civilians in the province of British Columbia. And it all began with a lack of intensity. A nauseating casualness of attack – a lack of intensity that puzzled and frightened me. The leisurely boat trip two hours after sun-up once the boys have had breakfast and a good laugh on the beach before heading over. It's like watching a hockey team with no jump, no edge, no professionalism and no heart. Blowing in the wind while the question – who is in charge, or even whether the fire boss on the scene gets the equipment that he needs – Martin Mars water bombers is moot and causes a waste of time and delay.

I admit it left me angry when I saw it and I was initially just angry about Okanagan Mountain Park but whenever I think about that thin plume of smoke, or equate that with the 2:00 a.m. and 5:00 a.m. fire patrols my family and I like many others in Kelowna volunteered to do during this fire – my family and friends being evacuated – the smoke in the air – the countless problems people in this community are left facing. I remain angry.

And if you take a minute to look at the Silver Creek Ombudsman Fire Reviews and at those pleadings in this previous presentation I think you will be angry at the fact that these people don't seem to learn.

And I hope you get angry and say something angry because unless you do, unless somebody does something, anyone like me who lives in an interface area is going to continue to have to worry about the efficiency and the professionalism of a fire response.

And, at some point in time we need better systems and better ideas to protect us all.

Thank you. Sorry to take so long.

GF Thank you very much Mr. Gordon. You have obviously given us a tremendous amount of information and as I said this afternoon everything you have said is part of the public record, a transcript of your presentation will be there for everybody to see. You asked a lot of questions that deserve answers and I will attempt to find answers to the questions that you have asked by going through, in detail, with the people from the Ministry of Forests this presentation.

JG Thank you, Sir. I wonder if I might have that photograph back, I will make copies and deliver them, that's my own copy.

GF Thank you very much.  
The next presentation is Mr. David Sumner. Welcome.

David Sumner.

Thanks Mr. Filmon and associates for being able to present – I just have a small presentation here. Our company is a fire retardant company and we have been working with Urban Interface for about ten years. We have developed light fuel opportunities for urban interface field management, grass fires, light fuels such as hotels, motels, mattresses, curtains, etc. we have numerous fire retardants for many different applications and all of our products are non-toxic and water based. One of our prime objectives is on light fuels in the home and in the urban interface such as dry grass and light brush accumulations. The product can be easily applied to the field with hand pumps, water trucks, portable spray systems. With ten degrees it takes about two hours to dry. This will cause an effect after the product has set to prevent any embers from catching the light fuel on fire in the treated areas. This protection will stay in place until it either rains or you apply water to wash it off, which then it just goes back into the ground as a nitrogen based compound.

Our products have been extensively tested around the world for safety to the aquatic life, the LD50 human the environment and we have achieved the highest standard for approval and safety on the effectiveness of these products. If our products don't meet or exceed any local standards for testing or for fire protection in the field, we are in a position to be able to make those approvals and get that recognition so the products can be used.

This information is just to start a dialogue to make fire retardants available to small communities and to the public, regarding urban areas that are responsible for their own first response to a fire situation. These products are designed to take the oxygen away from the burn triangle, thus slowing the aggression of the fire and creating response time.

In the event of a wild fire I don't propose to be able to have a product as good or better than anything that is used now. But, the embers of a wild fire are uncontrollable they go where the weather takes them. As to where they land is just up to a draw of the cards. It's just wherever the winds are blowing. But, response teams have a rough idea of where the fire is going. They know which direction it is traveling in and that's where they send their resources. If the fire is in the forest, our protection agency does an excellent job with bombers and the ground cover. But when the fire enters into a neighbourhood this is where an ounce of prevention is worth a pound of cure. That's where we put all our forces now, based on evacuation to get people out and now we have a neighbourhood fire situation.

Our products are not one that really can do any better than what we use now in the forest. But in the neighbourhoods we can make a difference and in the past ten years we have had great experience with testimonial and experience of resorts, urban interface, people who have used fire retardants that have had large fires in the area that were able to save their homes. These people

did it as a preventative measure because of the importance to try and keep what they have. A lot of the people here in this situation wanted to help, but there was really nothing they could do when they are told to leave. Some of them went and put sprinklers on their roofs, pumps in their pools and did everything they could. And it wasn't so much the house that caught on fire, it was the grass and the light fuels in the yard that the uncontrollable embers for the people that were on the ground to put them out got out of control, and we lose the odd house. As a matter of fact, a couple of hundred of them.

If people were aware that these products are available, and I make no mention of my company name to try and promote this, they are available. The government and the forestry put them out every day. But they are not available to the public. It's our job to try and create an education when we speak with the NFPA and Warners(?) and ULC, we do joint ventures. And we try to create a public awareness. We have changed the National Fire Code to reflect light fuels for school in the 20% rule where, in excess of 20% if you use a certified fire retardant product you can use as much as you want.

The government has given us schools to burn down in the event where we would go and put fire retardants in the school, in 22 minutes they couldn't light the school on fire. That was just with paper. These products are very cheap. A lot of them are easy to use. They could be used as soon as the fire is coming – we are going to evacuate people in the neighbourhood areas. There are also kinds of distribution equipment, pumps, etc., very cheap equipment that can dispense the fire retardant which is again totally environmentally safe and there are hundreds of them out there. The one that the forestry uses is one for example. They put a dye in it to see where it has been. And it will stop those fires.

In all of the news media coverage, you see the grass fire run underneath the car and not light the car on fire, that run up to the house and light the house on fire. We use gels to try and prevent houses from burning. The cost was mitigated by the insurance companies and government because it was in active first response. It was only good for a certain period of time. After 18 hours it had to be re-wet and it was good for 24. If the fire didn't get there for three days, you had to redo your house again and it was a big expense to take it off. These products come off with water. They are safe. If a cat drank it, there would be nothing problematic. If a child mistook it for water and drank it there would be no medical attention. We have spent millions of dollars testing these products around the world and have them in over 33 countries.

I was asked to do an informal test last year with forestry in the Merritt area where we went up into the forest and they were measuring the speed of the fire through the grass and determining the water content in the grass and what the fire rating would be for that area for that day. We went up and I just let forestry spray the fire retardant on, using their pump sprayers that they wore on their backs. We waited in the field while they did their other testing

for 45 minutes. They then went into the treated area and used their fire cans to try and do a back burn in the area and could not ignite the area. They even lit a bonfire in the centre of it with wood and other fuel from outside the burn area and could not light it on fire. They made note that it was one of the best fire retardants they had ever seen. We have done tests with Chemonics(?) we have done tests with all the people that are dumping it out of airplanes.

I offered 20,000 pounds of fire retardant for this fire and I was turned down. I wasn't even charging for it. We were going to go out with our crews and put it out in place because we know it works, we have done the successful informal tests with forestry.

So, as an industry standard company that has tried to work for years and spent millions of dollars to make things safer in the environment and worked with the fire codes, it comes to my attention that we need to spend a little bit more time on the fire codes and the recognition of the light fuel management in the urban interface areas.

I was told that I couldn't put this product out there because I didn't have any approval from Missoula, Montana. I phoned Missoula – Missoula said if you give us \$50,000 and 18 months of your time and your product works, we will put you on a bidders' list.

Well, it's not about dumping it out of airplanes. That is when the fire has already started. I want to protect the areas and that's what fire retardant – just the word 'retardant' means to do it preventatively before the fire starts. We knew hours before the fire came into the neighbourhoods that it was coming there. We asked the people to leave – some of them in the Barriere area were gone for days before the fire came. If anybody had the opportunity to use a fire retardant themselves, be it 50 cents or 50 dollars, it would have been a very small portion of what was spent to try and put the fires out. To prevent the fires – we do it in this building – with sprinklers and with table cloths and tables. I'd have a hard time lighting this table on fire with my Bic lighter because there is not enough BTU release out of the lighter. But, if I lit this tablecloth on fire, I could put the whole building down. So let's do the tablecloth.

If it was the light grass fuels that we couldn't cut down or send crews out preventatively because we didn't know where the fire was going to start, and when we knew the fire was coming there we could have gone into an action plan and spent one small fraction to prevent the fire from getting as large as it did. And I know we use fire retardants in the bush, but when its class 5 and it's aggressing at 150 feet a minute, nothing will stop that, nothing is fireproof. But it was the embers that lit the neighbourhoods on fire; it wasn't the rolling fire that came through, because not all homes were lost. They were sporadically lost and it was based on the available fuel that was in those areas. We allowed people to still go build in the urban interface; we put

sprinklers in their bathrooms and tell them you have to have a sprinkler in your house to contain the fire in the house. We don't address the row of cedars right outside the house.

So in the event of a fire coming and we have now gone into our emergency response where we are going to send bombers and helicopters and buckets and ground crews, etc., a \$50 bucket of fire retardant with a couple of hundred dollars pump with a monitoring dispersion equipment that all forestry – they all have them – everybody has them in that first line of defence. While we were evacuating people these could be set up and pumped out of a little truck – very cheaply. As a matter of fact, I was going to give it away.

So, when I got turned away, I thought well, with all the effort that I've put in and all the recognition we have around the world with testing, with the NFPA, etc., everywhere and we haven't gone out to just sell product on a shelf anymore. Our products aren't available off a shelf. They will be, because of this now. Because of the public awareness people have been crying for these products to be able to use something in the event. Well, it is the public that has the money; it's the public that was losing all of the land. They are the ones that we should look to for a little help as well in keeping the fuel loads down in their areas. And the only way we can do that is through education and in the building codes. When we issue permits to build, or we issue new land that is coming into the building realm and we let the developers go up and develop the land – that could be part of it – that's where it should start – that's how prevention happens. If we just allow it to continue to go, and not prevent this and worry about what's inside a few building materials, well then we are just part of the problem, we're not part of the solution.

So we are trying to build a bridge towards a fire safe community and that's the slogan used by the NFPA and other governing bodies around the world. It's working towards a safe tomorrow.

So I would just like to address that I think one of the suggestions would be to create an awareness of availability of fire retardants for building materials to be used in the urban interface, not only inside the building, but for the construction of the building as well. In the event of an emergency community backing is definitely key – that was mentioned by the chief a little earlier in one of his speeches. And I believe that the public wants to help. They were the ones that were put on the edge. They were the ones that were uninformed or misinformed, or – and left out to hang. But they are the ones that wanted to help. They're the ones that were trying; they are the ones that are so thankful now after the fact. I think we need to address before the fire starts. We can't do that with lightning or Mother Nature, she has her own power. But I can melt a penny in the palm of my hand with one sheet of paper. And I can prove two things – nothing is fireproof, but there is enough fire retardant in that sheet of paper to protect my hand from getting burned from 3,000 ° molten steel in my hand – metal. If we put those same fire retardants that are in that

paper, that's approved for kids to handle, be in schools, etc., and be in the environment, we could have all treated our shrubberies, our brush, our light fuels as we were putting our sprinklers on our rooves and then left. And the forestry and all the people helping to put the fires out, the response crews would have had that much more help from the people that had the loss.

But, we have a bureaucracy that's in such a way that even in the face of an emergency somebody can't give a product that works to the environment to be able to help. So, I don't know where industry standard can come in, but I stand here with our corporation saying that if we can help this forum in any way, in the future, working towards any testing, fields to be burned where we can prove this, to shortcut getting into the urban interface to make these products available ...

*(Tape 5)*

...

We have one person who had been registered for tomorrow but would prefer to speak tonight, Mr. Peter Dill.

Peter Dill:

PD If it's too late, I can ...

GF No, it's okay, I think we are probably going to have quite a few tomorrow, too.

PD Just before I start a comment to do with the last speaker. I actually just purchased a digital Sony Camcorder and it's a cheaper version of what he does, but for \$1400 you can actually get shades of green and I looked at the fire while it was going on and have much the same pictures that he has. Only they are not in the pretty colours. So it's not an expensive technology anymore.

GF Thank you.

PD Thank you very much Mr. Filmon and other members of the panel for this opportunity. I am just going to start right in because it's late at night. In order that you understand where I wish to place my comments, I divide the fire into two regions – the main path of the firestorm and the perimeter area which is approximately one kilometer around the firestorm area. And I wish to focus my comments on the perimeter area where in my opinion some structural losses were preventable. I also limit my comments to the several days leading up to the first night of structural loss in Kelowna, and to the geographical area of Lakeshore Road close to the edge of Okanagan Mountain Park. This includes the interface area of Rim Rock Road, Rim Rock Court, Timberline Road and Swit Road. Fifteen of the 30 homes in the community burned on that night, the first night when the fire hit Kelowna. That is August the 21<sup>st</sup>.

I present my comments under three headings. Just quickly: the importance of having personnel and equipment available for fire prevention 24 to 48 hours prior to a forest fire reaching a particular area. Second, the importance of having alternative access plans to protect homes that have single access roads that may become blocked by fingers of a firestorm. And third, the importance of having personnel and equipment devoted to spark extinguishing on and near structures and spot fire extinguishing in the perimeter zone of a firestorm.

The first one then, which relates to the 24 to 48 period before the fire strikes a particular area. We know the sprinkler systems and gels protect structures yet requests for assistance on property 24 to 48 hours before structures burn were unheeded. In the case of my daughter and her family's home which was about 300 meters from the Okanagan Mountain Park fire guard, extending up the hill from Lakeshore Road, three calls to the fire department for assistance were met with the response that they would get back to us – but they never did. Her home was among the 15 that were lost on the first night of structural devastation in Kelowna. Her's actually burned at half past twelve early on the 22<sup>nd</sup>, right after midnight, the night of the 21<sup>st</sup>. homes some distance south

on Lakeshore received considerable attention on the days prior to the 21<sup>st</sup>, with sprinklers, water bombers and retardants. For the audience, the white house – that's just – everybody knows the white house on the lake. Where was the protection for 164 Rim Rock Court and the other homes in the area on the days immediately before the fire reached there? Considering that these properties border the park, it was intuitively obvious that assistance would be needed. We needed the area more thoroughly soaked, or perhaps retardant, or gel. On every visit to the property during the week after the fire, fire personnel were there doing mop-up. Perhaps they could have been more effectively used during the 24 to 48 hours before the fire.

I recommend that when fire threatens we need to have for our immediate use sprinkler systems and gel for structural protection in interface zones. I recommend that we need personnel to install the equipment and in the event of public evacuation to maintain it. I suggest that a volunteer force could be developed for this purpose. Apparently Naramata has such a group. Local members of the public will recall that the many phone calls to the local media from the people who wished to fight the forest fire, but who had been told that they were not trained properly. Perhaps they would step up and be trained in an auxiliary force for bringing the protection to structures 24 to 48 hours before a fire arrives.

My second point – the importance of having an alternative access plan to protect homes that have single access roads. When the firestorm on the afternoon and evening of August 21<sup>st</sup> came down the hill and crossed Lakeshore in the Rim Rock/Swit Road area – that's the picture that I have at the back there. There is a distant one and then one more close up one I got off the web. The fire fighting equipment and fire fighters drew back along Lakeshore towards Kelowna. This left some 30 homes with no fire fighting protection. Houses like 165 and 164 Rim Rock were most likely ignited by sparks not by the firestorm. They burned to the ground without the presence of any fire fighting equipment or personnel, while the major firestorm was a considerable distance from these structures. And you will note that if you look at the pictures – that there is quite a distance – ½ a kilometer, in some places even a kilometer. In this case the blockage was due to the fire. Well another time it could be due to a car accident, fallen trees, or a mud slide.

I feel it is unacceptable for homes caught behind a blockage to be without fire protection at any time. Alternative protective methods should have been proactively planned and those plans put into action on the 21<sup>st</sup>. I think both forestry and the city fire fighting personnel should submit a plan for road construction that would provide better protection for these homes. Priority should be given to the building of alternative access roads even if they are emergency roads to all interface areas. Further, until the time when this is realized, I suggest that when interface areas are threatened, equipment and personnel be stationed and left in carefully chosen locations within the area that may need protection.

In this particular case, it may have been possible for a crew and equipment to have retreated south along the lake shore, thus being able to return to protect the homes even though their fellow fire fighters could not approach the area from the north – that is the Kelowna side – because of the firestorm. Or, perhaps they could have retreated down Swit Road and then returned up the hill to protect the structures. In both cases their final emergency retreat and shift changes could have been arranged via boats on Okanagan Lake.

However, and I stress this ‘however’ such a complex plan would have high risk if developed on the spot. It would have to be studied and carefully developed prior to the fire, practiced beforehand and then implemented on that evening.

My third comment is related to extinguishing sparks and spot fires and we have had a couple of other comments about that tonight. Sparks on the cedar deck possibly ignited my daughter’s home. Photographs and telescope observations indicate that the firestorm was some distance away from the burning house. The house was new so it had only dirt for 70 to 150 feet around it. So we are not talking about shrubs catching fire. The roof was metal and there were not eaves troughs so we can’t catch any needles from pine trees and after all it was only three weeks old, so we didn’t have much collection anyway.

A bluff beside the house on which there were three sprinklers was untouched by the fire. Trees surrounding the house were burned on the side facing the house. The deck had been soaked twice a day for several days before the fire, but only once on the morning of the 21<sup>st</sup>. We were prevented from visiting the home on that afternoon by the police. On the deck we left several garbage cans full of water and buckets to spread the water. Had the house been under careful observation I believe that it would have been a simple matter to extinguish these fires when they were started. Although someone in a vehicle was seen, using the telescope, to visit the house several minutes before it burned, no fire fighters or equipment were observed while the house burned. It appeared that 165 Rim Rock also ignited while some distance from the firestorm. Perhaps most of the 15 homes that were lost that night came similarly to this fate. Although some I know were directly in the path of the firestorm.

I think there should be a designated task force that is composed of several fire fighters with a truck and many trained volunteers that maintain contact with that truck, devoted to monitoring spot fires in the perimeter area of a firestorm. Regular fire fighters are too busy fighting structures and fighting the firestorm. In densely populated areas, the volunteers would probably do best by moving on foot in pairs. In more sparsely populated areas like the Rim Rock and Timberline area, they could travel between structures using vehicles and then circle the homes on foot. Large spot fires would require the assistance of their fire truck – in other words a devoted fire truck for that. I would suggest

that the volunteers be from the area. The reason for this is that they know the local paths in the interface zone. As I mentioned previously I suggested an auxiliary group to set up fire protection 24 to 48 hours before a fire reaches a particular area. Perhaps they could also perform the local volunteer force to check for sparks and spot fires.

In conclusion, I am of the opinion that had we learned more from others and implemented plans that were developed on this area based on the experience of others, the disaster would not have been so great. Given the Penticton, Naramata and Salmon Arm interface fires of the years' past, I think there should have been more long term preparedness for our interface event on the part of both the forest service and the City of Kelowna. Further, given the immediacy of the McLure fire, the Falkland fire, there should have been more short term local preparation. Although only through communication with others at the municipal, regional, provincial and now, with the California fires, the international level, can fire personnel learn more about interface fires and be more proactive in anticipation of similar events in their jurisdiction.

Clearly the fire moves too fast and is too threatening to train as you fight.

Thank you very much.

GF Thank you very much, Peter. If I may just ask a couple of questions, I would take it that you are supportive of building houses of fire retardant or fire resistant materials and any precautions that can be built into the design.

PD Yes, also the grounds, particularly. My daughter had 7 acres of trees and we actually had a fire consultant come in last spring who went through the property and made recommendations for us. We had about 15 people in for quite an amount of time trimming all trees up to eight feet off the ground, removing all fuel and duff and we got about half the property done, extending a good 200 to 300' from the house. So besides the dirt being around the house, we had also done what was recommended in that forest area.

You might be interested to know about the other half, for comparison purposes – it is a beautiful experiment here, with two treatments. The other half is a bunch of burnt flagpoles, is severely burned. That was the area we didn't get to, that was next spring's job. The area that we had thoroughly cleaned – the fire went through very fast and the grass was burned, the trees were scorched, but we won't know until next spring – we think that a lot of the pines will probably recover. Some have been taken down that were burned badly and I think the majority of them might spring back. When talking to different foresters and people who are familiar with this, if about 2/3 of the crown is still green, you probably stand a fairly good chance – so we are hoping.

GF So, despite all of these precautions ...

- PD Oh, I think we did the best we could. I really do. I just would have liked a little bit more help.
- GF The access road, the road access situation – I guess you would be recommending that in new subdivision that plans not be approved if there isn't an alternative access or egress.
- PD I don't know if that is the case in Kelowna right now, I just don't know. But it is the case in Penticton and I do ask why Kelowna didn't learn from Penticton if Kelowna doesn't have a similar regulation. I mean they are not far down the street.
- GF Well thank you very much for your time and effort. We appreciate this.

I hesitate to do this, my colleagues are probably getting a little tired, but we are meeting tomorrow from one until nine with a break for dinner. But if there is somebody who is here tonight that can't come back tomorrow, I would be willing to sit and listen to more. Is there anyone else who wants to appear?

If not, then thank you very much all of you, and good night.