Gorham #1
Sworn January 26, 2007

No. C976108
Vancouver Registry

IN THE SUPREME COURT OF BRITISH COLUMBIA

BETWEEN:

EDWARD KILLOUGH, PATRICIA NICHOLSON, IRENE FEAD, DAPHNE MARTIN, DEBORAH LUTZ and MELANIE CREHAN
as representative plaintiffs

PLAINTIFFS

- and -

THE CANADIAN RED CROSS SOCIETY, HER MAJESTY THE QUEEN IN RIGHT OF BRITISH COLUMBIA, AND THE ATTORNEY GENERAL OF CANADA

DEFENDANTS

Proceeding under the *Class Proceedings Act, 1992*

AFFIDAVIT OF PETER GORHAM
(Sworn January 26, 2007)

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I, PETER GORHAM, of the Town of Whitby in the Regional Municipality of Durham, in the Province of Ontario, actuary, **MAKE OATH AND SAY THAT:**

I am a partner in the national actuarial firm Morneau Sobeco and have carriage of my firm's engagement by the Government of Canada ("Canada") to prepare a financial-distribution model that conforms to the terms of the settlement agreement negotiated in the Pre-1986/Post-1990 Hepatitis C Settlement Agreement (the "Pre-1986/Post-1990 Settlement") and, as such, have knowledge of the matters to which I hereinafter depose, save and except what is stated to be on information and belief, and where matters are so described, I verily believe them to be true.

Professional Designation and Qualifications

2. I received a Bachelor of Science in actuarial science and computing science from the University of Toronto in 1976, and completed my actuarial studies in 1980. I then received my full professional designations for actuarial practice in both the United States of America and Canada, becoming both a Fellow, Society of Actuaries ("FSA") and a Fellow, Canadian Institute of Actuaries ("FCIA") in 1980. Since then, I have devoted my professional time to my duties as a pension and actuarial consultant providing advice to corporate and government clients. I also have continued to play an active role in the professional education of Canadian actuaries and pension administrators, and in the governance of the professional societies for which I have been admitted to fellowship. Now shown to me and marked as Exhibit "A" to this my affidavit is a copy of my *curriculum vitae* which provides the particulars of my professional activities over the course of my career, including the professional associations and committees to which I have belonged, my publications and conference presentations, and my policy contributions to government proposals for pension and tax legislation.

3. My *curriculum vitae* also summarizes my employment history and the types of responsibility I have held as a consulting professional who provides expert advice to the pension and insurance industries. It discloses that, for more than 25 years, I have advised my clients on the design and implementation of pension plans, including plan documentation, the design of plan administration and employee communications, and the costing and valuation of pension plans and benefits.

4. I have provided testimony as an expert witness before tribunals and courts in Ontario, British Columbia, Alberta and Quebec in a variety of matters. In terms of class actions, I have provided evidence in the following matters, each of which is related to the charging of interest and whether such interest contravenes the Criminal Code of Canada.

(1) *Stephen Markson v. MBNA Canada Bank* [Ontario Court File 03-CV-254970 CP]

(2) *Margaret Smith and Ron Oriet v. National Money Mart Company and Dollar Financial Group, Inc* [Ontario Court File 03-CV-1275]. I understand that this matter remains before the courts at this time.

(3) *Kurt MacKinnon v. National Money Mart Company* [B.C. Court File S030527]. I understand that this matter remains before the courts at this time.

5. I was also engaged on behalf of the Attorney General of Canada ("Canada") in *Authorson* v. *Attorney General of Canada [99-GD-45963]* (veterans pension class action) to provide expert advice to the Ontario Superior Court during the assessment of damages.

6. I was also engaged by Canada to provide an expert opinion to the superior courts in British Columbia, Ontario and Quebec regarding the financial sufficiency of the trust fund created pursuant to the settlement agreement between the federal, provincial and territorial governments of Canada and the class action plaintiffs claiming compensation for infection with hepatitis C ("HCV") during the period between January 1, 1986 and July 1, 1990. I understand that this matter remains before the courts at this time.

Engagement of Morneau Sobeco by Canada for within matter

7. In July 2005, Canada engaged Morneau Sobeco to provide a team of actuarial advisors to assist its litigators in exploring the possibility of developing a negotiated settlement with plaintiffs' counsel in the four class actions in British Columbia, Alberta, Ontario and Quebec. I was the actuary designated to lead a team of 6 professional consultants who assisted counsel in weighing the feasibility of possible approaches to a settlement plan. I am the person primarily responsible for the content of the opinions in this affidavit.

8. In November 2005, Cabinet approved a memorandum of understanding with plaintiffs' counsel which committed Canada to negotiating a settlement. Following that, I was instructed to assist counsel for Canada by preparing scenarios to cost out a possible settlement based on a present value model which would achieve parity, to the extent possible, with the compensation payable under the settlement for those infected with HCV by blood between January 1, 1986 and July 1, 1990.

9. On December 14, 2006, the counsel for Canada and counsel for the class action plaintiffs in the four actions entered into the Pre-1986/Post-1990 Hepatitis C Settlement Agreement.

Information obtained from or through Crown counsel

10. The following is a brief summary of the previous settlement and compensation plans for those infected with HCV by blood.

11. On June 15, 1999, the federal, provincial and territorial governments entered into a negotiated settlement for those infected with HCV by transfusion between January 1, 1986 and July 1, 1990 (the "1986-1990 Settlement"). The settlement also extended to HCV infected haemophiliacs and thalassemics who received blood or blood products during the same period. The 1986-1990 Settlement was approved by the superior courts in British Columbia, Ontario and Quebec, which had jurisdiction in the related class actions. Under the 1986-1990 Settlement, Canada contributed 8/11^{ths} of the total compensation fund, which was equal to $846,327,527.

12. I also made reference to the following documents for purposes of my work:

a. Report of the Joint Committee Relating to the 1986-1990 Hepatitis C Trust Fund, June 30 2005, by J.J. Camp, Q.C., Bonnie Tough, Michel Savonitto and Harvey Strosberg, Q.C., (the "Joint Committee Report");

b. The report of the Medical Model Working Group entitled "Estimating the Prognosis of Canadians Infected With the Hepatitis C Virus Through the Blood Supply, 1986-1990 – Second Revision of HCV Prognostic Model Incorporating Data From the Compensation Claimant Cohort", May 2005 by Murray Krahn MD MSc FRCPC, Peter Wang, MD PhD, Qilong Yi MD PhD, Linda Scully MD FRCPC, Morris Sherman MD FRCPC, Jenny Heathcote MD FRCPC, (the "MMWG Report");

c. "Actuarial Report Assessing the Financial Sufficiency of the 1986-1990 Hepatitis C Trust Fund as at 31 December 2004", February 2006, by Peter Gorham (the "1986-1990 Actuarial Report").

d. "Report to Lauzon Belanger, s.e.n.c., Hepatitis C Pre-86 Post 90 Class Action Settlement Plan" 31 May 2005, by KPMG, inc., (the "KPMG Report").

13. With the consent of the Joint Committee appointed to oversee the 1986-1990 Settlement, counsel for Canada obtained a court order to release the compiled data and medical and actuarial analysis from the administration of the 1986-1990 Settlement (the "1986-1990 Data"). The order stipulated that the data be disclosed only to counsel for Canada and to their agents for the purposes of exploring possible settlement options. The 1986-1990 Data provided an empirical record of the actual claims experience over a period of more than five years. I also benefited from firsthand discussions with several of the medical-modelling experts, administrators and actuaries who contributed expertise to the 1986-1990 Settlement.

14. Within the larger framework of insolvency proceedings taken under the Companies' Creditors Arrangement Act ("CCAA"), the Canadian Red Cross Society ("CRCS") proposed to sell many of its assets and to gather additional funds from the medical community and insurers who contributed monies to a settlement fund in return for Court protection from litigation (the "Red Cross Settlement"). These funds were used to make a payment to creditors, including transfused claims that were excluded from the 1986-1990 Settlement. British Columbia plaintiffs also obtained an additional cash amount from their provincial government in return for a release of the Government of British Columbia.

15. Following the Court approval of the CCAA Plan of Arrangement, the representative plaintiffs in each of the class action jurisdictions (British Columbia, Ontario, and Quebec) applied to their respective courts for approval of the Red Cross Settlement, and approval was granted.

16. In addition, the governments of Ontario, Manitoba and Quebec compensated residents of their own province who were infected with HCV by blood, but were ineligible to receive compensation under the 1986-1990 Settlement Agreement. These provincial benefit programs were known respectively as the Ontario Hepatitis C Assistance Program, the Manitoba Hepatitis C Assistance Program, and the Quebec Financial Assistance Program for Persons Infected with the Hepatitis C Virus. Subsequently, the province of Quebec settled the class actions against it and received a release in exchange for an additional sum. The Quebec settlement was approved by the courts on January 27, 2004. Counsel for Canada provided me with extensive documentation pertaining to the particulars of the 1986-1990 Settlement and the Red Cross Settlement. I received no documentation related to the provincial compensation plans and settlements.

17. I reviewed the materials provided by counsel for Canada in order to understand the background and context in which my professional services would be delivered. In order to prepare scenarios to cost out a possible settlement, I also needed information concerning the number of potential claimants and the current medical condition of those infected with HCV by blood prior to 1986 and after 1 July 1990.

18. To this end, plaintiffs' counsel who had also acted for pre-1986/post-1990 claimants in the CRCS CCAA proceedings obtained a court order authorizing KPMG, the court-appointed administrator of the Red Cross Settlement, to release to Canada and its agents, a non-personalized compilation of the information provided by the claimants to the settlement (the "KPMG Data"). The class period defined in the Red Cross Settlement is prior to January 1, 1986, and from July 1, 1990 to September 28, 1998 inclusive.

19. The KPMG Data was given to me on December 12, 2005. Data concerning the claimants included:

a. Their date of birth;

b. The date on which they were diagnosed with HCV;

c. Whether they were primarily or secondarily infected with HCV;

d. Whether they were haemophiliac or received blood by transfusion;

e. When they received blood (that is, pre-1986, 1980 to 1990, or post-1990);

f. The province or territory in which they had received blood;

g. Whether they had applied for benefits under the provincial compensation schemes; and

h. Whether the claim was for the estate of a deceased HCV victim.

20. Further into the negotiations I also received some data regarding the cohort of a pre-1986/post-1990 class. This data was the result of a survey-research project by class counsel who mailed out a basic personal-data questionnaire to the potential Class Members. In January 2006, I was provided with data from class counsel relating to 3,134 survey responses.

Attached Exhibits

21. There are a number of exhibits attached to my affidavit. I will make recurring reference to some of these herein. These exhibits are:

Exhibit "A" Copy of my curriculum vitae.

Exhibit "B" Summary of the Pre-1986/Post-1990 Settlement setting out the compensation amounts payable to Class Members there under. Now shown to me and marked as Exhibit "B" to this my affidavit is a copy of the Summary of the Pre-1986/Post-1990 Settlement.

Exhibit "C" Summary of the 1986-1990 Settlement, setting out the compensation amounts payable to class members there under. Now shown to me and marked as Exhibit "C" to this my affidavit is a copy of the Summary of the 1986-1990 Settlement. This Exhibit "C" is an extract of Appendix A from my 1986-1990 Actuarial Report.

Exhibit "D" Summary of Actuarial Assumptions. Now shown to me and marked as Exhibit "D" to this my affidavit is a copy of the Summary of Actuarial Assumptions.

Exhibit "E" Summary of Class Member Data. Now shown to me and marked as Exhibit "E" to this my affidavit is a copy of the Summary of Class Member Data.

Exhibit "F" Glossary of Terms Used. Now shown to me and marked as Exhibit "F" to this my affidavit is a copy of the Glossary of Terms Used.

The 1986-1990 Settlement

22. The 1986-1990 Settlement provides compensation based on disease progression. HCV affects individuals differently and disease progression is personal to each claimant. Likewise, the compensation is personal to each claimant and is paid "if and when" a claimant reaches a certain disease stage. As a claimant's condition worsens, payments increase. Because payments are based on disease progression, the settlement will be administered for at least 80 years.

23. The 1986-1990 Settlement also provides compensation for treatment for HCV, out of pocket expenses, and loss of income. Further, should a class member die as a result of HCV, there is compensation payable to family members, dependants and for uninsured funeral expenses.

24. The model for the 1986-1990 Settlement was developed based on the following:

a. An estimate of a national cohort, which was based on epidemiology reports and expert opinion, rather than actual claims experience;

b. A disease-progression model was developed to predict how the disease would advance during the course of the lifetime of a claimant;

c. Financial-sufficiency estimates to predict, to the extent possible, whether the settlement would adequately meet the claims of members as their disease progressed during their lifetimes. The risk of insufficiency is borne by the class members.

25. The 1986-1990 Settlement identifies six disease levels as threshold conditions for payment of incremental amounts of compensation:

(1) A positive HCV antibody test indicating that the person was infected with HCV in the past;

(2) A positive PCR test indicating that HCV is present and the person is at risk for possible advancement of the disease;

(3) Diagnosis of non-bridging fibrosis of the liver, or the claimant either has been found medically eligible for an HCV treatment program or has undergone such treatment;

(4) Diagnosis of bridging fibrosis;

(5) Diagnosis of cirrhosis of the liver; and

(6) Presentation with one of a number of serious conditions including liver decomposition, hepatocellular cancer or a liver transplant.

26. The "if-and-when" approach of the 1986-1990 Settlement means that as actual claims are processed over time, initial forecasts can be adjusted to provide increasingly accurate numbers of how many persons were infected and how likely and swiftly they may experience a worsened disease state. The first claims deadline in the 1986-1990 Settlement is June 30, 2010.

27. The ongoing claims experience from the 1986-1990 Settlement sets markers for actual rates of disease progression, since all primarily infected cohort members will have been infected at least 16 years ago and some more than twenty years ago. Empirical data created through the administration of the 1986-1990 Settlement supplants to an ever greater extent the forecasts adopted as risk-management tools at the time the compensation plan was initiated. In addition, the more complete the data set the more reliable it becomes as a standard for comparison with similar cohorts of claimants suffering from similar disease conditions.

Relationship of the Pre-1986/Post 1990 Settlement to the 1986-1990 Settlement

28. The Pre-1986/Post-1990 Settlement was designed to achieve parity, to the extent possible, with the 1986-1990 Settlement, based on Canada's contribution to the latter; that is, 8/11ths of the total amount. Another key objective was to pay "one time present value lump sum amounts", as opposed to "if and when" payments based on disease progression.

29. A summary of the compensation under the 1986 to 1990 Settlement and the amounts payable is contained in Exhibit "C". I will be making significant reference to the 1986-1990 Settlement and the specific amounts of compensation available from it, since those benefits form the basis for the compensation amounts under the Pre-1986/Post 1990 Settlement.

Applying the "If and When" Approach under the 1986-1990 Settlement

30. As a person progresses through the various levels of HCV, additional compensation is payable. As well, there is compensation available should a class member undergo treatment for HCV, incur out of pocket expenses, or suffer a loss of income. Further, should a class member die as a result of HCV, there is compensation payable to family members, dependants and for uninsured funeral expenses.

31. For example, if a 1986-1990 Settlement class member who is presently diagnosed with non-bridging fibrosis (level 3) files a claim in January 2007, she will receive compensation for levels 1 to 3 for a total of $60,000. (This figure is made up of $10,000 for level 1, $20,000 for level 2 and $30,000 for level 3). Additional amounts may be payable depending on whether the claimant has undergone a treatment program, incurred out of pocket expenses, and so on.

32. If that same class member is diagnosed in 2012 with bridging fibrosis (level 4), she will also be eligible to claim for any loss of income or loss of support in the home. If she works full time until 2015, and then switches to part-time work, which results in a $25,000 loss of income, upon submitting a 2016 income tax return proving this loss of income for 2015, she will be compensated for the $25,000 loss. As long as she continues to have a loss of income as a result of her infection with HCV, loss of income benefits will be payable each year following the filing of her tax return.

33. If she is diagnosed with cirrhosis in 2020, she will receive a further $65,000 at level 5. She will remain entitled to the loss of income payments, which may increase if she needs to reduce her working hours or change to a less demanding job.

34. Compensation will continue as she progresses through the disease stages and has an income loss. If she dies as a result of her Hepatitis C infection and there are dependants who survive her, there will be ongoing payments each year to her dependants. These dependant benefits are payable based on her life expectancy, which is determined assuming that she was not infected with HCV.

Calculation of a Lump Sum Present Value

35. In my opinion, the benefit of using a lump sum settlement compared to the "if and when" approach is:

a. It avoids large ongoing administration costs that could reduce funds available to compensate class members;

b. The use of a single lump sum payment means that class members receive all or most of their compensation at an earlier date; and,

c. Because the progression of HCV is better understood today than when the 1986-1990 Settlement was developed, we have used a better model for disease progression, and we are better able to assess the amount of lump sum compensation that would be appropriate.

36. Morneau Sobeco was asked to develop one time lump sum present value payments based on the 1986-1990 Settlement amounts. These lump sums are the present value of 8/11^{ths} of the future compensation payable under the 1986-1990 Settlement, based upon certain actuarial assumptions. These actuarial assumptions are attached as Exhibit "D".

37. The calculation of a present value for future possible events is done as follows. For this example, the lump sum calculation models what would happen for a claimant under the 1986-1990 Settlement. In addition, for this example, the class member is assumed to be at level 2 (positive PCR test). A similar process is followed for each of the other levels as well as for deceased claimants. The only difference is in the various events that need to be considered at each level.

38. We start by assuming the class member files a claim for compensation as of 1 January 2007. Since this person is at level 2, she would receive compensation for levels 1 and 2 (total of $30,000) immediately upon approval.

39. The calculation then looks at each future year in sequence, one year at a time. All future years are considered for as long as the claimant could be alive. Based on the mortality tables used, we proceed with the calculation until the claimant's entire potential lifetime of 110 years is reached.

40. We start by looking at what might happen in the first year - 2007. In particular, the probability of the disease level changing over the first 12 months is considered. This includes:

a. the probability of clearing the virus and moving to level 1;

b. the probability of advancing to level 3;

c. the probability of death from a cause other than HCV; and

d. the probability that there will be no changes and that she will remain at level 2.

41. For each of these possible outcomes, the amount of compensation payable under the 1986-1990 Settlement is determined. For the possible outcomes in 2007, there is no additional compensation payable for items (a), (c) and (d). For item (b), $30,000 of compensation is payable, (ignoring the possibility of the claimant waiving the lump sum in favour of receiving compensation for loss of income or loss of services).

42. The amount of compensation payable for each outcome is then multiplied by the probability of the claimant being eligible for the payment. This represents the expected amount to be paid during 2007. For example, if there is a 5% probability of transitioning to level 3, we would multiply 5% by $30,000 and get an expected payment of $1,500.

43. This process is repeated for each subsequent year during the entire potential lifetime of the claimant. Based on the above example, in 2008, the claimant could be at level 1, 2, 3 or be deceased. Each of these possibilities is analyzed and the potential transition to other disease levels is determined. It should be noted that, although each possibility is analyzed, a claimant can, in reality, only be in one of the situations. The compensation for each disease level, including future assumed inflation, is then multiplied by the probability of the claimant being eligible for payment.

44. Applying the above calculation, a complex array of possible disease progression and compensation over time is produced. A series of expected cash flows (representing future expected compensation payments) is also determined. These future cash flows are discounted for interest back to January 2007. The total of these discounted amounts is the lump sum present value of future expected compensation amounts. A final step involves making an adjustment for the effects of personal income taxes. The details of the adjustment are described below.

45. To perform these calculations, we created a computer model to analyze disease progression, the potential compensation payments, and compute the resulting lump sum present values.

Effect of Income Taxes

46. Under the 1986-1990 Settlement, the compensation is not taxable to the class members when it is paid. Further, the compensation trust fund itself is not taxed. Taxes are only payable if a class member invests a compensation payment and earns income on that investment.

47. As a result, the lump sum present value amounts in the Pre-1986/Post-1990 Settlement were increased in order to provide compensation for additional taxes that may be payable by the Class Member during the time the money is in the member's hands rather than in the non-taxable compensation fund. In other words, the income tax adjustment only applies to the period of time between when the lump sum present value is paid and the time that a compensation amount would have been payable under the 1986-1990 Settlement Agreement.

The MMWG Medical Model

48. A medical model regarding disease progression was created for the 1986-1990 Settlement. The Medical Model Working Group ("MMWG"), a team of medical experts comprised of Murray Krahn, Peter Wang, Qilong Yi, Linda Scully, Morris Sherman and Jenny Heathcote, prepared a report entitled *Estimating the Prognosis of Canadians Infected With the Hepatitis C Virus Through the Blood Supply, 1986-1990 -- Second Revision of HCV Prognostic Model Incorporating Data From the Compensation Claimant Cohort* (the "MMWG Report"). This report, which was last updated in May 2005, identifies the major stages of disease progression of Hepatitis C, and tracks the likelihood of an individual attaining a certain disease stage and the rates of progress through each stage. A copy of the MMWG Report is attached as Exhibit "B" to the affidavit of Dr. Mang Ma, sworn January 15, 2007 in the motion record of the moving party herein.

49. The following is a summary of my understanding of the Hepatitis C disease progression as it has a bearing on my work, based on my review of the MMWG Report. I have utilized these findings in the determination of the lump sum present values and the actuarial evaluation of this fund's sufficiency.

50. The rate at which Hepatitis C develops varies from person to person. It can take many years before some people will notice that they are sick and discover they have the disease, whereas others will progress through the various stages much more quickly.

51. In the MMWG Report, the progression of HCV is measured using the Metavir Scale, which I understand is a generally accepted standard for measuring the progression of liver disease through biopsy. This is different from the disease levels recognized for compensation. In this affidavit, I refer to the Metavir Scale as disease "stages" and to the compensation plan as disease "levels". A comparison of these is shown in Table 1 below.

52. The stages which are modelled in the MMWG report differ from the levels which are used for compensation under the 1986-1990 Settlement. However, based on the relationships used in the MMWG Report which were also adopted by the actuaries valuing the 1986-1990 Settlement, we have determined an approximate relationship between the levels and stages.

53. The disease stages modelled in the MMWG Report and the corresponding disease levels recognized under the Pre-1986/Post 1990 Settlement are:

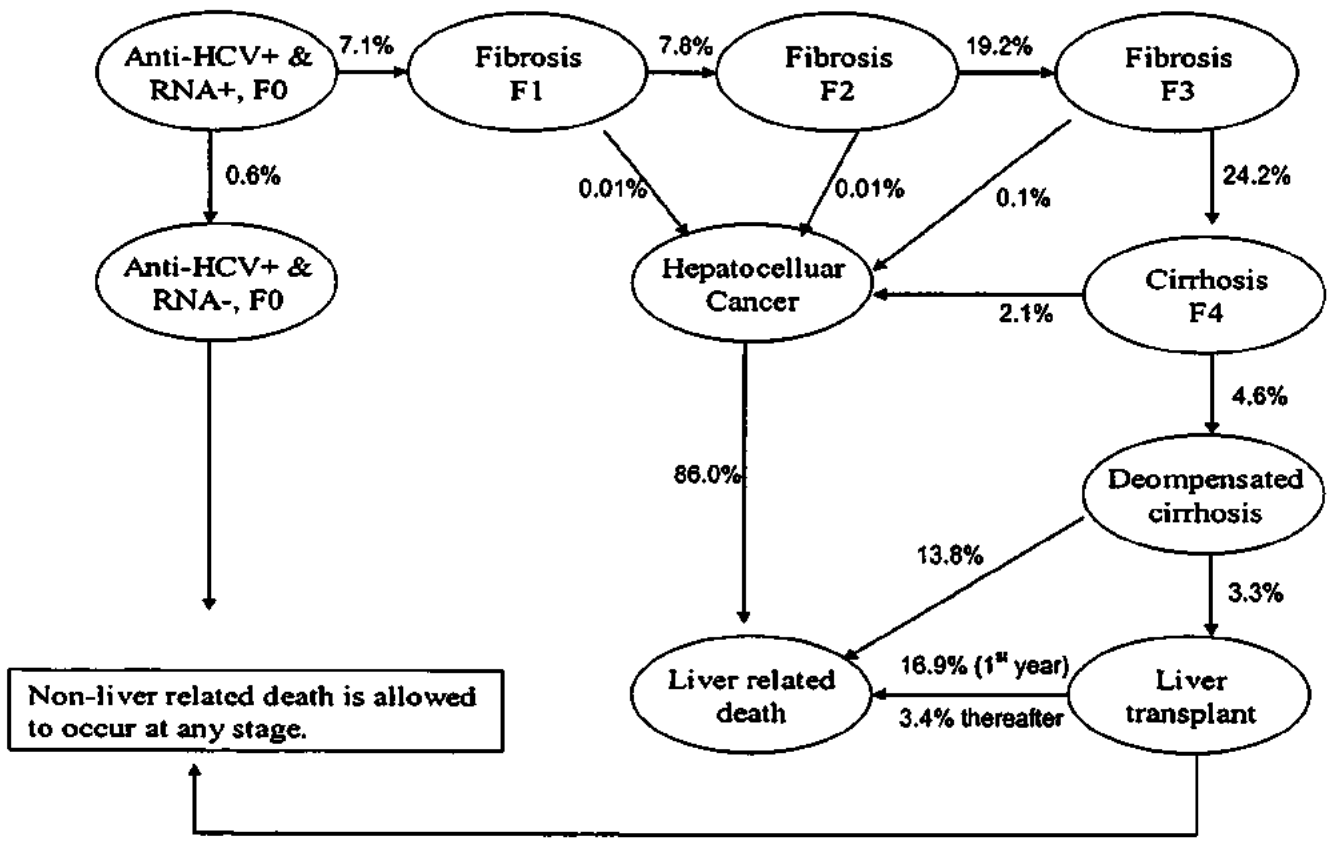
Table 1 - Hepatitis C Disease Stages and Levels

MMWG Stage	MMWG Stage Description	Compensation Plan Levels	Compensation Plan Description
F0(RNA-)	Fibrosis Stage 0 – RNA negative	1	Claimants who have cleared the virus
F0(RNA+)	Fibrosis Stage 0 – RNA positive	2	PCR test positive
F1	Fibrosis Stage 1	3	Non-Bridging Fibrosis
F2	Fibrosis Stage 2		
F3	Fibrosis Stage 3	4	Bridging Fibrosis
F4	Cirrhosis	5	Cirrhosis
HCC	Hepatocellular Cancer	6	Cancer
Decomp	Decompensated cirrhosis		Liver decompensation
Transplant	Liver Transplant		Liver Transplant
Death	Liver related death		Death

54. The following chart shows the disease progression as recognized and modelled in the MMWG Report. The percentages shown on the chart are the baseline probabilities for a transfused person of transitioning from one disease stage to another over the course of a year. As discussed below, transition probabilities for those who have been successfully treated are lower.

Disease Progression as Modeled in the MMWG Report

Figure 1 Simplified Schematic Markov Model of Natural History of HCV Infection



This chart is taken from the MMWG Report. Each circle represents a health state for the individuals infected due to blood transfusion in Canada. Each solid arrow represents possible transitions between health states that may occur each year. The percentages have been added to the chart to indicate the annual baseline probability of transitioning between disease stages.

Mortality from non-liver related causes

55. The MMWG Report recognizes that a person with HCV is still at risk of death from causes other than HCV. This possibility is also recognized in the Pre-1986/Post 1990 Settlement. A claimant who dies from non-liver related causes remains entitled to any payments made or due based on the stage reached prior to death, but is not entitled to any additional payments as a result of death.

Excess mortality related to the condition requiring blood transfusion

56. The MMWG Report considers the possibility of the existence of a mortality rate in excess of average population mortality, resulting from the condition which necessitated the receipt of blood. According to the report, any such excess mortality would reduce to nothing or an immaterial level, during the ten years following the receipt of blood. Since most class members entitled to compensation under the Pre1986/Post 1990 Settlement received blood more than 10 years ago, the possibility of excess mortality factors unrelated to HCV is ignored in my modelling.

57. The possibility that a claimant may subsequently receive another transfusion and thereby may be subject to excess mortality, due to the underlying condition requiring the administration of blood, has been ignored as this possibility is already included in the Canadian population mortality table used herein. The Canadian population mortality table recognizes all Canadians and therefore includes people who receive blood. The mortality rates will therefore include the excess mortality arising from transfusions as part of the reported rates.

Transition Probabilities

58. The progress of a claimant through the various disease levels is modelled using probabilities. The transition probabilities used in our calculations are the same as those used in the MMWG Report, and represent the probability of transition from one disease level to another during the course of one year.

59. The basic transition probabilities are taken from Table 6 of the MMWG report and are shown in Table 2 below. The baseline probabilities represent the median probabilities and are the values used in our calculations. These probabilities are adjusted for the effects of successful treatment in the same manner as was done in the MMWG Report.

Table 2 - Transition Probabilities

From Stage	To Stage	Transition Probability
F0(RNA-)	F1	0.0%
F0(RNA+)	F0(RNA-)	0.6%
F0(RNA+)	F1	7.1%
F1	F2	7.8%
F2	F3	19.2%
F3	F4	24.2%
F4	Decompensation	4.6%
Decompensation	Transplant	3.3%
F1	HCC	0.01%
F2	HCC	0.01%
F3	HCC	0.1%
F4	HCC	2.1%

60. With the exception of non-HCV related mortality (Canada Life Tables, 1997, which are based on age and gender), the transition probabilities do not vary by age, gender or duration of infection.

Effect of Treatment on fibrosis progression

61. The MMWG model assumes that treatment is considered for patients at three stages - F0(RNA+), F1 and F4. At each of these stages, a percentage of the patients are given treatment, and a percentage of those treated respond successfully to the treatment. These percentages are:

Table 3 - Treatment Probabilities

Stage	Percentage of all Patients who Receive Treatment	Successful Response Among Those Treated	Successful Response Among all Patients
F0(RNA+)	14.0%	42.0%	5.8%
F1	80.0%	50.0%	40.0%
F4	75.0%	25.0%	18.8%

62. A patient who has been successfully treated is assumed to be subject to transition probabilities at approximately 10% of the baseline probabilities shown in the Table 2 (paragraph 59). This reduced probability applies at all stages up to liver decompensation for the patient's future life. However, I was informed by Dr. Krahn that in the MMWG model, treatment does not affect the probability of transition directly to cancer (HCC) and I have accepted that assumption for purposes of my calculations.

63. Patients who did not receive treatment or where the treatment was not successful are eligible for treatment at one of the subsequent stages where treatment is offered. However, the MMWG model assumes that no new treatments are given to patients more than 65-years-old, who have not yet received successful treatment.

64. In the process of producing results for the 1986-1990 Class, it became clear that the population projections we were producing with these assumptions did not agree with the projections that were shown in the MMWG Report. Our implementation of the MMWG model was resulting in fewer patients advancing through the disease in the future than shown in the MMWG Report. We determined that we could produce matching population projections by increasing the disease transition rates for successfully treated patients from the 10% described above to 25%. By using population projections that agree with those in the MMWG Report, the compensation amounts are consistent with the MMWG model.

65. We have therefore utilized the same treatment assumptions in our calculations as were used in the MMWG Report, but with the 10% multiplier for transition rates changed to 25%. This produces higher lump sum compensation amounts for the Pre-1986/Post-1990 Class Members than if we had utilized the 10% assumption.

Effect of Haemophilia on Disease Progression

66. Both the MMWG Report and my 1986-1990 Actuarial Report treat haemophiliacs and non-haemophiliacs differently. This different treatment is not required for the Pre-1986/Post-1990 Class Members in determining the present value compensation amounts.

67. The MMWG Report states that the progression of the disease is believed to be similar in haemophiliacs and non-haemophiliacs. However, a person who is infected with both HCV and HIV was found to progress through the Hepatitis C disease stages much faster than a person who was not co-infected.

68. In the MMWG Report, it was noted that a significantly greater percentage of haemophiliacs were co-infected with HIV when compared to the HIV infection rate among the general population. No difference was noted among the non-haemophiliacs.

69. In general, haemophiliacs require blood products from significantly more donors than do non-haemophiliacs. Consequently, among the 1986-1990 Class, there was a significant percentage of haemophiliacs who were co-infected with HIV, since HIV was also passed through blood product.

70. The MMWG Report reviewed haemophiliacs and non-haemophiliacs separately. That is appropriate for the 1986-1990 Class. Due to the definition of class member, most haemophiliacs in Canada who require blood products are members of the 1986-1990 Class.

71. Some people in the Pre-1986/Post-1990 class have identified themselves through the KPMG Data as being haemophiliac. To be eligible to be a class member of the Pre-1986/Post1990 Class, they must not have received blood or blood product during the period 1 January 1986 to 1 July 1990. It follows that they would likely be infrequent users of blood product, particularly prior to 1990.

72. Accordingly, it is unlikely that the Pre-1986/Post-1990 Class Members are co-infected with HIV to a statistically significant degree different from the general population. Consequently, I include no additional description or analysis of the disease progression as it affects an HIV co-infected person.

73. For the purposes of our calculations, disease progression is assumed to be similar for haemophiliacs and non-haemophiliacs.

The MMWG Model – Population Projections

74. The MMWG Report presents a series of tables which show the expected future population distribution of existing claimants by age and disease stage (Tables 8.1-2 to 8.1-20 in the MMWG Report). To verify that we implemented the transition probabilities correctly, we performed a population projection to duplicate the various tables in the MMWG Report.

75. In the MMWG Report, the population projections were performed using Monte-Carlo simulations with each of the transition probabilities assumed to be subject to a probability distribution. Our projections were performed using the transition probabilities without any probability distributions. As a result, while we expect our projections to be close to the MMWG projections, they are unlikely to be equal.

76. We were able to reproduce the MMWG population projections within a reasonable range, recognizing the different methods of projection used and some minor approximations made in our projections.

Applying the MMWG Report Findings to the Pre-1986/Post-1990 Class

77. The known claimants under the 1986-1990 Settlement formed a basis for the MMWG Report. The composition of that group likely differs from the pre-1986 and post-1990 class in two respects. Most haemophiliacs who contracted HCV through the blood supply are members of the 1986-1990 class, due to their having received blood product within the class period and as a result of the relevant class definition. Secondly, pre-1986 claimants have likely progressed further with the disease than those in the 1986-1990 class, given a longer infection time. While the post-1990 claimants are likely less advanced in the disease, they represent only a small portion of the total class.

78. The methodology employed in our calculations largely eliminates any effects on the results which might arise from these differences. The presence of haemophiliacs is only an issue if one needs to consider the possible effect of HIV co-infection. Since co-infection with HIV is not considered, the presence or absence of haemophiliacs has no effect on the present values.

79. The different degree of progression through the disease stages between the 1986-1990 class and the Pre-1986/Post-1990 class has been reflected in the assumption about the current disease distribution of the pre-1986/Post-1990 class members. This is described in paragraph 180.

80. Consequently, we can apply the results of the MMWG report to the Pre-1986/Post-1990 class without introducing bias.

Actuarial Assumptions

81. The calculation of the lump sum present values involves a number of actuarial assumptions. The actuarial assumptions used in the determination of the lump sum present values are discussed in Exhibit "D".

Calculation of Compensation Amounts

82. The first step in determining the compensation amounts was to determine how to divide potential class members into homogenous groups for determining the actual compensation to each group. We divided the class into the following groups: alive HCV infected class members, deceased HCV infected class members, family members, and dependants.

Alive HCV Infected Class Members

83. The 6 disease levels identified in the 1986-1990 Settlement Plan and the compensation payable under that plan are used to determine the compensation payable under the Pre-1986/Post-1990 Settlement to HCV infected class members who are alive. The compensation payments they would be expected to receive while alive as well as amounts payable to their estate (uninsured funeral expenses) should their death be caused by HCV were valued. This left two amounts which could be payable following death from HCV – family benefits and dependant benefits.

84. Under the 1986-1990 Settlement, compensation is only payable to dependants who are dependant on the infected person at the time of their death and then only for as long as they remain a dependant. Under a present value lump sum approach, however, people who are dependants of an alive HCV infected Class Member at the date of filing a claim will not necessarily be a dependant at the time of death. Further it would be very difficult to determine an appropriate amount of time during which each potential dependant would be assumed to remain a dependant.

85. Consequently, for the purposes of the settlement, we have included the present value of future dependant amounts should the HCV infected class member die from HCV in the lump sum amounts payable to the alive HCV infected class member.

86. The present value of future family benefit amounts was determined and is payable to each eligible family member under the Pre-1986/Post-1990 Settlement. In so doing, the possibility of the family member predeceasing the HCV infected class member was ignored – providing a slightly greater amount than if such possibility had been recognized.

Deceased HCV Infected Class Members

87. The deceased class members were subdivided into four groups, corresponding to the groupings under the 1986-1990 Settlement.

a. Those who died prior to 1999 where HCV was not the cause of death receive no compensation. Likewise, the 1986-1990 Settlement does not compensate this group.

b. For those who died prior to 1999 where HCV was the cause of death, their personal representative, family members and dependants will be given a choice of compensation similar to the 1986-1990 Settlement. However, where the 1986-1990 Settlement provides dependants with ongoing compensation for loss of support or loss of services in the home, the Pre-1986/Post1990 Settlement provides a lump sum present value of the expected future compensation amounts. The compensation amounts are payable to the HCV infected class member's estate, as well as to the family members and any dependants as at the date of death.

c. Where death occurred on or after 1 January 1999 and HCV was not the cause of death, the lump sum amount payable is based on what the person would have expected to receive at their highest disease level as if they were applying for the first time under the 1986-1990 Settlement. Since HCV was not the cause of death, there is no amount payable to family members nor to dependants.

d. For those who died on or after 1 January 1999 and HCV was the cause of death, compensation is payable to their estate, family members and dependants. The estate receives an amount similar to that which is payable to someone applying for the first time based on the disease level reached, plus an amount for any uninsured funeral expenses.

Family and Dependant Benefits

88. Two types of compensation are payable following a death caused by HCV: dependant benefits and family benefits.

89. Compensation to dependants is paid if they are dependant on the HCV infected person at the time of death, for as long as they would have remained a dependant. Dependants receive lump sums representing the present value of 8/11ths of the future expected benefits which would be payable under the 1986-1990 Settlement.

90. Family members receive a lump sum based on 8/11ths of the amount payable under the 1986-1990 Settlement.

Adjustments

91. In determining the amount of compensation, the amounts payable under the 1986-1990 Settlement were used and adjusted to reflect the portion payable by Canada, which was 8/11ths of the total compensation provided. In addition, where a lump sum present value of future expected payments was calculated, an adjustment for possible future income taxes was added.

92. While the total compensation fund includes a reasonable provision for adverse deviations (to provide a buffer in case total compensation amounts exceed the amounts expected to be paid), most of the lump sum amounts were reduced by 10% to provide a further buffer against adverse experience. Provided the experience under the fund results in sufficient monies, there is a provision to pay a "Claims Experience Premium" following approval of the courts which is expected to equal the amount of this reduction.

93. Because the amount of compensation payable to a claimant at level 1 is relatively small, this 10% reduction was not applied to the level 1 amount and therefore Class Members at level 1 will not participate in any Claims Experience Premium distribution.

94. Further, the 10% reduction was not applied to the amounts payable to family members, dependants or for past economic losses. Therefore compensation paid to family members, dependants and in respect of past economic losses will not be recognized in the distribution of any Claims Experience Premium.

95. All of the amounts shown in the Schedules to the Pre-1986/Post-1990 Settlement are net of the 10% reduction, where applicable.

96. 8/11ths of any compensation received from the Red Cross Settlement is offset from the compensation payable under the Pre-1986/Post-1990 Settlement, as described below. Payments from provincial compensation plans or settlements are not deducted.

97. Any lump sum amount payable that is less than $100 (after the reduction for Red Cross Settlement amounts) will be increased to $100.

Amounts of Compensation

98. The specific amounts of compensation are described in Exhibit "B".

99. Under the Pre-1986/Post-1990 Settlement, the amount payable as compensation to alive HCV Infected Class Members at any level except level 1 varies with the year of birth of the Class Member.

100. The following paragraphs describe the benefits under the 1986-1990 Settlement which were recognized in the determination of the Pre-1986/Post-1990 compensation amounts. The lump sum amounts were calculated with reference to the compensation payable under 1986-1990 Settlement and were adjusted by 8/11ths to reflect the portion funded by Canada.

101. By way of illustration, the lump sum amounts payable to a person born in 1949 are shown in the section headings below. (1949 is the average year of birth for class members identified in the data as being alive.) These amounts do not include an amount for past economic losses nor do they include any amounts payable to some other person.

Alive Claimant – Level 1: $8,453

102. The lump sum compensation at Level 1 was derived from the Level 1 payment under the 1986-1990 Settlement, plus an average amount payable under the 1986-1990 Settlement to compensate for out of pocket expenses incurred in filing the claim and obtaining necessary medical evidence. This dollar amount is expressed in 2007 dollars and will be adjusted for inflation from 2007 to the date of payment.

103. The MMWG Report does not recognize disease progression from level 1. As a result, the compensation amount is the same for all ages.

Alive Claimant – Level 2: $62,802

104. The lump sum amount is the sum of:

a. The lump sum amount payable to a claimant at level 2 under the 1986-1990 Settlement;

b. An average amount payable under the 1986-1990 Settlement to compensate for out of pocket expenses incurred in filing the claim and obtaining necessary medical evidence; and

c. The present value of the future compensation payable based on expected disease progression. This amount includes:

i. the possible future lump sum amounts for levels 3 to 6;

ii. potential loss of future income or loss of services in the home (based on an average amount for such losses);

iii. compensation for future treatment programs, uninsured drug costs and out of pocket expenses; and

iv. compensation payable should death be caused by HCV, including uninsured funeral expenses and amounts payable to any dependants as of the date of death.

105. The lump sum dollar amount is expressed in 2007 dollars and is to be adjusted for inflation from 2007 to the date of payment.

106. An alive claimant at level 2 does not receive a present value of future family benefits. Such benefits are payable to family members as described below.

107. Compensation for past loss of income and/or past loss of services in the home (past economic losses) are payable to the HCV infected person in addition to this lump sum amount and are described below.

Alive Claimant – Level 3: $123,936

108. The compensation amount is similar to that payable to level 2 claimants as described above, with the exception that the references to level 2 should be to level 3 and the reference to levels 3 to 6 should be to levels 4 to 6.

Alive Claimant – Level 4: $207,714

109. The compensation amount is similar to that payable to level 2 claimants as described above, with an appropriate adjustment to the level numbers.

Alive Claimant – Level 5: $249,515

110. The compensation amount is similar to that payable to level 2 claimants as described above, with an appropriate adjustment to the level numbers.

Alive Claimant – Level 6: $306,929

111. The compensation amount is similar to that payable to level 2 claimants as described above, with the exception that the reference to level 2 should be level 6 and there is no further disease progression recognized other than death as a result of HCV.

Deceased Prior to 1999 from HCV

112. As provided in the 1986-1990 Settlement, there are two forms of compensation for estates of deceased claimants who died prior to 1999 from HCV. The disease level of the HCV Infected Class Member at the date of death is not a factor in determining compensation. These amounts are based on the lump sum amounts under the 1986-1990 Settlement, multiplied by 8/11^{ths} and reduced by 10%. Funeral expenses of $5,000 are also multiplied by 8/11^{ths}, but are not reduced by 10%. For example under the 1986-1990 Settlement, there is a $50,000 lump sum amount. Multiplying this $50,000 by 8/11ths and subtracting 10% gives a lump sum of $32,727.

113. The two forms of compensation are as follows:

a. $32,727 lump sum plus up to $3,636 for uninsured funeral expenses are payable to the personal representative of the HCV infected person; and

amounts payable to family members and dependants as described below; or

b. $78,545 lump sum is payable in total, provided the personal representative of the deceased HCV infected person, all family members and all dependants so agree.

114. These dollar amounts are expressed in 1999 dollars and are to be adjusted for inflation from 1999 to the year of payment.

Deceased After 1998 from HCV

115. The personal representative of the deceased HCV Infected Class Member will be paid a lump sum representing the present value of 8/11^{ths} of the expected benefits which would be payable under the 1986-1990 Settlement to a deceased claimant based on the disease level of the deceased at the time of death. Those lump sums are:

Level 1	$ 8,453
Level 2	23,480
Level 3	46,959
Level 4	46,959
Level 5	97,832
Level 6	176,098;

Under the settlement, there are amounts shown for death from HCV at levels 1 to 4. I have been advised by Dr. Samuel Lee, Faculty of Medicine at the University of Calgary that there should be no medical reason for a person at levels 1 through 4 to die as a result of HCV.

116. In addition, the personal representative will receive up to $3,636 (8/11^{ths} of $5,000) for uninsured funeral expenses.

117. The amounts payable to family members and dependants are described below.

118. The lump sum amount based on disease level does not vary by age since it reflects amounts payable for past events and is not dependant on what may happen in the future. Therefore none of the items that result in a variation by age for an alive claimant are present for a deceased claimant.

119. The lump sum amounts by disease level are expressed in 2007 dollars and are adjusted for inflation from 2007 to the year of payment. The funeral expense amount is expressed in 1999 dollars and is to be adjusted for inflation from 1999 to the year of payment.

Deceased After 1998 from causes other than Hepatitis C

120. The personal representative of a deceased HCV Infected Class Member who dies from causes other than HCV will be paid a lump sum amount equal to the lump sum amount payable to a claimant at the disease level of the deceased. These amounts are the same as those set out in paragraph 115 above.

121. The lump sum amount based on disease level in such a case will not vary by age since it reflects amounts payable for past events and is not dependant on what may happen in the future. Therefore none of the items that result in a variation by age for an alive claimant are present for a deceased claimant.

122. Since the death was not caused by HCV, there is no compensation payable to family members or dependants nor on account of uninsured funeral expenses.

123. The lump sum amounts by disease level are expressed in 2007 dollars and are adjusted for inflation from 2007 to the year of payment.

Family Members of Deceased HCV Infected Claimants

124. Lump sum amounts are paid to certain family members of deceased HCV infected persons. Family members in the Pre-1986/Post-1990 Settlement are defined in the same manner as in the 1986-1990 Settlement and the Red Cross Settlement. The amounts payable are equal to 8/11ths of those payable under the 1986-1990 Settlement. Those amounts are:

• Spouse	$21,762
• Child under age 21	13,057
• Child over age 21 or more	4,352
• Parent	4,352
• Sibling	4,352
• Grandparent	435
• Grandchild	435

125. These lump sum amounts are expressed in 2007 dollars and are adjusted for inflation from 2007 to the year of payment.

Family Members of Alive HCV Infected Claimants

126. Lump sum amounts are paid to certain family members of HCV infected persons who are alive. The amounts are equal to what would be payable upon the death of the HCV Infected Class Member with a discount applied for the possibility that they may never die from HCV as well as for expected future time to death.

127. The amounts payable were determined based on the average age of all HCV infected class members.

128. For a spouse, the amounts payable are:

- Level 1 0
- Level 2 727
- Level 3 2,310
- Level 4 5,527
- Level 5 8,499
- Level 6 13,893

129. The amounts of benefit for other family members are shown in Schedule C3a to the Pre-1986/Post-1990 Settlement and are described in Exhibit "B".

130. No compensation is payable to family members of class members at Level 1, since there is no probability of disease progression from that level.

Dependants of Class Members Deceased Due to HCV

131. Compensation is payable to family members who were dependant on a deceased HCV infected person for the balance of the period during which the dependency would have existed. The maximum period of benefits is for the remaining life expectancy of the HCV infected person calculated as if there was no HCV infection and based on the Canada Life Tables as published by Statistics Canada. Compensation is only payable, however, if the death was caused by HCV.

132. The lump sum payable to dependants of those who died as a result of HCV infection is based on the deceased's situation prior to death. That is, to receive compensation, a dependant must show an actual loss of income and/or loss of services in the home, resulting from the death of the HCV infected person. In addition, the HCV Infected Class Member's age at death is used to determine the future life expectancy of the deceased person.

133. The amount of compensation payable is equal to 70% of the loss of net income (if any) or the value of any loss of services in the home. This is an annual amount of compensation to be divided among all dependants.

134. We developed two tables of factors, in Schedules C4 and C5 of the Pre-1986/Post-1990 Settlement, which can be multiplied by the amount of the annual loss to give the lump sum present value of all future payments. The lump sum present value of all future payments is determined as of the date of death. The lump sum, therefore, includes amounts payable from the date of death up to the date of payment as well as a present value for future amounts.

135. If there is only one dependant, the length of time the dependency is expected to exist is based on the life expectancy of the HCV infected person and the life expectancy of the dependant. If there is more than one dependant, each one must be examined independently to determine the longest potential period of dependency.

136. In general, there are three ways that dependency can cease: death, completion of school, and separation or divorce (depending on the terms of the separation agreement). We have recognized only death and completion of school for purposes of determining the lump sum value. There are 2 types of dependency – while a minor/student and for life. For purposes of predicting when a student will complete school, we have assumed that all students will remain in school until age 25. In determining compensation, we only need to recognize the longest expected period of dependency.

137. Schedule C4 sets out the factors based on the HCV infected person's age at death for a situation where at least one dependant is expected to be a lifetime dependant. Schedule C5 sets out the factors based on the age of the youngest dependant where the period of dependency is expected to end at age of 25. Both Schedules provide present value factors for the stated period of dependency taking into account both inflationary increases to the amount of loss and discount to the date of death for future interest.

138. For each of the following three examples, I assume the HCV infected person died at age 48, resulting in a net lost income of $20,000 per year and lost services in the home of $12,000 per year.

a. For a spouse aged 45 and two children aged 10 and 13, the assumed dependency periods are: lifetime for the spouse (whose life expectancy is 35 years), 15 years for the 10-year-old child, and 13 years for the 12 year-old child. The lump sum payment for dependants will be based on the joint life expectancy of the HCV infected person and the spouse, since that results in the longest potential period of dependency. The lump sum dependants' amount (based on Schedule C4) would be 70% x $20,000 x 12.39 + $12,000 x

7.53 = $263,820. (Note that the factors 12.39 and 7.53 are found in Schedule C4).

b. A 75-year-old grandparent is a dependant and the caregiver of 2 children aged 10 and 13. The assumed dependency of the 75 year old grandparent is 11 years. In that situation, the longest period of dependency would be for the 10 year old child, which is 15 years. The lump sum payable to the dependants (based on Schedule C5) would be 70% x $20,000 x 12.773 = $178,822. (Note that the factor 12.773 is found in Schedule C5).

c. If the 13-year-old child is disabled, a lifetime dependency is assumed. The lump sum amount payable would be determined based on the joint life expectancy of the HCV infected person and the 13 year old child. The lump sum payable to the dependants would be the same as the first example above, - 70% x $20,000 x 12.39 + $12,000 x 7.53 = $263,820. (Note that the factors 12.39 and 7.53 are found in Schedule C4)..

139. Unlike the other lump sum calculations, the compensation for dependants is calculated as of the date of death, since it is the life expectancy of the deceased HCV infected person as of the date of death that determines the period of dependency. If we use the life expectancy as of the date of claim, the future life expectancy would be overstated.

140. Consequently, we must be able to adjust the resulting lump sum amount from the date of death to the date of payment. The factors to do that adjustment are contained in Schedule C6 to the Pre-1986/Post-1990 Settlement. These factors essentially reverse the interest discounting for that period of time that is contained in Schedules C4 and C5 based on the individual's situation.

141. The amounts payable to dependants are subject to limits in order to decrease the likelihood of exhausting the funds prior to the filing of all claims. Provided there are sufficient funds available, an application can be made to the courts to remove these limits. The limits as they currently exist are:

a. Where the compensation is based on loss of income, 70% of the loss will be paid initially.

b. Where the compensation is based on loss of income, the maximum amount of income to be considered is $75,000 per annum.

142. For HCV Infected Class Members who are alive, the present value of any dependant compensation is included in the lump sums set out for the alive claimants.

Past Economic Losses

143. Some Class Members, alive and deceased, may have suffered a past loss of income, or been unable to perform services around the home as a result of their infection with HCV.

144. The lump sum amounts for Class Members who are alive include an amount for future economic losses, but no recognition of any actual past losses.

145. Compensation is payable under the Pre-1986/Post-1990 Settlement for 8/11ths of economic losses incurred prior to the date on which a claim was filed, while the HCV Infected Class Member was alive. The amount of compensation is based on the amount of documented lost income, net of specified deductions (e.g. income taxes, Canada Pension Plan contributions) in each year where the lost income was as a result of infection with HCV. Where there is no lost income, but an HCV infected class member is unable to perform services in the home, compensation is payable up to specified limits. An HCV infected person at age 65 or older can only claim for loss of services in the home.

146. The amounts payable for past economic loss are subject to limits set in order to decrease the likelihood of exhausting the available fund prior to the filing of all claims. Provided there are sufficient funds available, an application can be made to the courts to remove these limits. The limits as they currently exist are:

a. For a loss of income, 70% of the loss will be paid initially.

b. For a loss of income, the maximum amount of income to be considered is $75,000 per annum.

Past Economic Loss and Dependant Fund

147. A sub-fund is to be established out of which compensation in respect of past economic losses as well as amounts payable to dependants will be paid. As discussed later, it is my belief that the risk of insufficiency due to these compensation amounts is greater than the risk of insufficiency for all other compensation amounts. The use of this sub-fund will isolate any adverse deviations in expected compensation to dependants and for past economic losses so they do not affect any other amounts payable.

Dynamic Non-Segregated Family Benefits Fund

148. The Pre-1986/Post-1990 Settlement refers to a "Dynamic Non-Segregated Family Benefits Fund" (section 4.02). This is essentially a notional fund for the purpose of monitoring and accounting for compensation to family members.

149. Under the lump sum present value approach, an assumption was made about the dollar amount of benefits which would be paid to a deceased HCV Infected Class Member's family. The present value of that future possible compensation was calculated. This produced a lump sum amount for compensation to an average family of an average HCV infected person (as set out in Schedule C3). This lump sum is not paid directly to any one, but instead the family members receive a prescribed amount (as set out in Schedule C3a).

150. The administrator of the Pre-1986/Post-1990 Settlement will perform a calculation to determine the balance in the Dynamic Non-Segregated Family Benefits Fund. The number of HCV Infected Class Members who are approved at each disease level is multiplied by the corresponding amounts in Schedule C3. From that total the amounts actually paid to all family members is subtracted.

151. If the result of that calculation is positive, there is additional money to be paid out. The Pre-1986/Post-1990 Settlement calls for this to be paid to the HCV Infected Class Members at levels 2 to 6 pro rata to the amount for their disease level under Schedule C3. If the result of the subtraction is a negative number, there is no additional payment required.

152. For example, if the total amount based on Schedule C3 is $40 million and the actual amount paid out is $36 million, there is a total of $4 million left in the Dynamic Non-Segregated Family Benefits Fund to be paid out. This represents 10% of the $40 million total amount. Therefore, each HCV infected person will receive an additional payment equal to 10% of the amount shown for their disease level under Schedule C3. For a person at level 5, this would give an additional payment of 10% of $14,261 or $1,426.

Red Cross Settlement

153. Persons who contracted HCV from blood received in Canada and who are not eligible for compensation under the 1986-1990 Settlement were eligible to receive compensation from the Red Cross Settlement.

154. The Red Cross Settlement fund provided $10,300 for each HCV infected class member. If there were any family members (defined the same way as under the Pre-1986/Post 1990 Settlement), the compensation they received was offset from the total amount payable to the HCV infected class member. Spouses and minor children received $300 and all others $100. If the total amount payable to all family members exceeded $800, it was reduced on a pro-rata basis so the total would be $800.

155. Thus, the minimum payable to the HCV infected class member under the Red Cross Settlement was $9,500.

156. For purposes of reducing the lump sum amounts under this Pre-1986/Post-1990 Settlement by amounts received from the Red Cross Settlement, the reduction is for 8/11ths of the amount actually received by the individual. Payment to an HCV infected person who received the full amount from the Red Cross Settlement would be reduced by $7,491 and someone who received the minimum would be reduced by $6,909.

157. The total of all Red Cross amounts to be deducted from compensation under this Pre-1986/Post-1990 Settlement is expected to be about $42 million. The $962 million settlement fund is net of the deduction of this $42 million.

Minimum Payment of $100

158. The Pre-1986/Post-1990 Settlement calls for a minimum payment of $100. None of the lump sum amounts payable to alive or deceased Class Members are less than $100 and even with an offset for the full amount of the Red Cross Settlement, they will remain greater than $100. The only compensation amounts which could be less than $100 are payable to family members. Without this provision, grandchildren and grandparents of HCV Infected Class Members at levels 2 and 3 would be compensated at less than $100. Others, including all family members other than a spouse at level 2 could also receive less than $100 depending on the amount of the compensation they received from the Red Cross Settlement.

Claims Experience Premium

159. One of the adjustments made to most of the lump sum amounts was to reduce them by 10% in order to reduce the possibility of fund insufficiency. The Settlement Agreement calls for the amount of this reduction to be paid out to those who received compensation following court approval. The Claims Experience Premium is to be calculated to be 1/9th of the amount of compensation received by the HCV infected claimants.

160. However, since there was no reduction applied to their compensation, the following do not participate in the Claims Experience Premium payment.

- HCV Infected Class Members at level 1, whether alive or deceased,

- Family members
- Dependants
- Any amounts payable on account of Past Economic Losses.

161. Where an HCV Infected Class Member died of HCV prior to 1999 and where the $78,545 compensation was elected, the entire lump sum amount is eligible for the 1/9th Claims Experience Premium. A Court Approved Protocol for payment of the Claims Experience Premium will need to address that there may be amounts payable to either or both family members and dependants despite the previous paragraph.

Class Size and Characteristics

162. The class characteristics and size did not enter into the determination of the compensation amounts. The amounts payable to an individual are dependant only upon present disease level and age of the person.

163. The assumed class size and characteristics were, however, used to determine the total amount of the compensation fund and will determine how much compensation in total is paid.

164. I am advised by John Spencer, one of the counsel for Canada in this matter, that class counsel informed Canada there were 5,619 approved claims under the Red Cross Settlement.

165. Counsel for Canada instructed me to adopt that figure of 5,619 as the assumed class size for the purposes of my calculations.

Data Sources

166. Two sets of claimant data were provided to us by legal counsel for Canada who received it from class counsel to the Pre-1986 /Post-1990 Class.

167. The KPMG Data included information on 6,019 persons. Counsel for Canada informed me that the KPMG Data was a compilation of non-identifying claimant information assembled from applications by claimants under the Red Cross Settlement.

168. A supplemental data file was also provided which was compiled by class counsel based on the initial responses to a survey sent to claimants under the Red Cross Settlement. This data file included information on 3,134 persons.

169. In May 2005, KPMG prepared a report based on the claims made under the Red Cross Settlement as of 12 April 2005. According to that report, there were a total of 5,788 applications from primarily infected claimants, of which 5,372 are reported as having been accepted as class members. An additional 214 secondarily infected claimants were reported with 170 accepted as class members.

170. The KPMG Data had 6,019 people included, but the KPMG Report indicated that only 5,542 had been approved as class members for the Red Cross Settlement. The KPMG Data did not include any indication of which people were rejected for membership in the Red Cross Class. Thus, the KPMG Data is of limited use for my purposes. In my opinion, the KPMG Data is reasonable and appropriate for determining the distribution of the Class members by year of birth. Since the definition of class member is essentially similar under the Red Cross Settlement and the Pre-1986/Post-1990 Settlement, I am able to use this age distribution for purposes of my work hereunder, and I have done so.

Usefulness of the Data

171. The data provided cannot be used directly to provide financial results for the amount of compensation expected to be paid. However, by applying information from the characteristics of the 1986-1990 class, we can derive a reasonable picture of the important characteristics of the Pre-1986/Post-1990 class.

172. Where I show results based on class member data, I have done so based on a pro rata portion of the entire data file of 6,019 people.

173. Table 4 summarizes the age distribution as of January 2006. The average age of the known Class Members is 57. This table was created using the KPMG Data.

Table 4 - Initial Age Distribution

Age Range		Proportion
0	20	0.6%
20	30	2.6%
30	40	5.7%
40	50	24.9%
50	60	28.8%
60	70	15.9%
70	80	14.0%
80	90	6.5%
90	120	1.0%

Deceased HCV Infected Class Members

174. Based on the KPMG Data, 18.6% of the class members were deceased as of May 2005. Based on the supplemental data, 14.8% of the class is deceased. I believe that both of these percentages are low. Since the KPMG Data was compiled, some additional class members will probably have died.

175. After negotiations with class counsel, John Spencer, one of the counsel for Canada, instructed me to adopt an assumption that 895 members of the class should be regarded as deceased. Based on an assumed class size of 5,619, this results in approximately 16% being deceased. While I believe that this number is lower than reality will show, it is conservative for purposes of this report and for sufficiency of the compensation fund. The average lump sum compensation payable to a deceased class member is lower than to an alive member. This is primarily due to the additional compensation for future disease progression and future economic loss while a class member is alive.

Cause and Date of Death

176. We need to split the deceased class members between those whose death was caused by HCV and those whose death was due to other reasons. Because compensation amounts and terms differ, we also need to split the data between those who died prior to 1999 and those who died after 1998. Neither source of data contained any information about the cause of death.

177. After negotiations with class counsel, John Spencer, one of the counsel for Canada, instructed me to adopt an assumption that 281 of the deaths (31%) occurred prior to 1999 and the balance of 614 after 1998 (59%).

178. Based on the experience of the 1986-1990 class, and my review of the 1986-1990 Data approximately 50% of the deaths from 1999 to 2004 were classified as caused by HCV. In the MMWG medical model, the percentage of deaths due to HCV is about 17%. However, that 17% level is not reached until after 2030. It appears that there are significantly more deaths among the 1986-1990 class being classified as due to HCV than predicted by the MMWG model.

179. I am informed by John Spencer, one of the counsel for Canada, that the parties negotiated certain assumptions respecting deaths from HCV and the number of deceased class members at each disease stage. The assumption was that 38% of all deaths occurred as a result of HCV and the number of deceased class members at each disease stage is as shown below in Table 5 below (following paragraph 181). Mr. Spencer instructed me to adopt these assumptions.

Initial Disease Distribution

180. Most class members of the Pre-1986/Post-1990 Settlement were infected with HCV prior to 1986. The average date of infection was 1980, about 8 years prior to the average date of infection for the 1986-1990 class. I adopted a conservative approach and projected the distribution forward by 10 years. The result was used as the initial disease distribution for the pre-1986 and post 1990 class.

181. Regarding deceased claimants, compensation for class members who died prior to 1999 does not vary based on the disease level attained. For those who died after 1998, compensation depends on the highest disease level attained, as well as whether the death was the result of HCV.

Table 5 - Initial Disease Stage Distribution

Disease Stage	Plan Level	Percent	Number
F0(RNA-)	1	22.5	1,062
F0(RNA+)	2	12.5	590
F1	3	22.3	1,052
F2	3	10.1	477
F3	4	8.0	377
F4	5	18.9	892
HCC	6	3.8	24
Liver Decompensation	6	1.5	179
Liver Transplant	6	0.5	71
Total Alive Members		***100.0***	***4,724***
Deceased – non-HCV pre 1999		18.2	163
Deceased – HCV pre 1999		13.2	118
Deceased – non-HCV post 1998	1	9.0	80
	2	6.8	61
	3	14.5	130
	4	3.9	35
	5	7.6	68
Deceased – HCV post 1998	4	0.0	0
	5	5.0	45
	6	21.8	195
Total – Deceased Members		***100.0***	***895***
Total – All Members			**5,619**

The Compensation Fund

182. The Pre-1986/Post-1990 Settlement requires that Canada make a single contribution to the compensation of $1,023,475,575. $962,000,000 is for class member compensation and $20,000,000 is for administration costs. The balance is for class counsel fees, their disbursements and taxes on those amounts.

183. I was involved in the determination of the $962,000,000 for class member compensation. The balance of this section is concerned only with that portion of the fund.

184. The total amount for Class Member compensation has been established and will be contributed by Canada as a single lump sum. Canada has no further obligation to contribute additional monies.

185. I have, therefore, determined the total amount to be contributed by first calculating the total expected compensation payments based on the assumed number of Class members and their assumed characteristics. To this amount, I have added a provision for adverse deviations equal to approximately 15% of the total expected compensation payments.

186. When I refer to adverse deviations, I mean situations where the actual experience will prove to differ from the assumptions so as to result in more compensation to be paid than assumed.

187. It is likely that the actual experience under the Compensation Fund will differ from the assumptions. Some of these deviations will likely reduce the amount of compensation from that expected and some will likely increase it.

188. Tables 6 to 10 summarize the amounts of compensation expected to be paid to Class Members based on the Settlement Agreement, the 5,619 assumed claimants and the actuarial assumptions discussed above.

Table 6 – Expected Compensation – Alive Claimants

Status	Plan Level	Number	Lump Sum	Total
Alive Claimants	1	1,062	8,453	8,975,719
	2	590	65,133	38,422,845
	3	1,529	126,134	192,865,083
	4	377	203,348	76,772,331
	5	892	243,388	217,088,763
	6	274	299,979	82,109,701
Total Alive Claimants		***4,724***		***616,234,442***

Table 7 – Expected Compensation - Deceased Claimants

Status	Plan Level	Number	Lump Sum	Total
Deceased – non-HCV pre 1999		163	0	0
Deceased – HCV pre 1999				
- elect $32,728+ option		61	43,481	2,667994
- elect $78,545 option		57	93,919	5,319,572
Deceased – non-HCV post 1998	1	80	8,453	676,240
	2	61	23,480	1,432,265
	3	130	46,959	6,104,735
	4	35	46,959	1,643,582
	5	68	97,832	6,652,595
	6	0	176,098	0
Deceased – HCV post 1998	4	0	51,308	0
	5	45	102,180	4,598,117
	6	195	180,446	35,187,012
Total – Deceased Members		***895***		***$64,282,112***

Table 8 – Expected Compensation – Family Members

Status	Plan Level	Number	Expected Average Per Family	Total
Family of Alive Members	2	590	1,221	720,017
	3	1,529	3,875	5,925,381
	4	377	9,273	3,501,000
	5	892	14,261	12,719,873
	6	274	23,311	6,380,584
Family of Deceased – HCV pre 1999				
- elect $32,728+ option		61	36,515	2,240,560
- elect $78,545 option*		57	0	0
Family of Deceased – HCV post 1998		240	36,515	8,763,600
Total for Family Members				***$40,251,015***

Table 9 – Expected Compensation – Past Economic Losses and Dependants

Status	Number	Expected Average	Total
Dependants			
- Deceased – HCV pre 1999			
- elect $32,728+ option	61		6,559,566
- elect $78,545 option*	57	0	
- Deceased HCV – post 1998	240		12,828,357
Past Loss of Income and Services in the Home			60,179,307
Total for Past Economic Losses and Dependants			***$79,567,230***

* Compensation for Class Members who died prior to 1999 where the $78,545 option is elected, is shown above in total as a lump sum payable to the personal representative with nothing payable to family or dependants. The actual payment will be allocated among the personal representative, family members and dependants as the claimants determine.

Table 10 – Total Compensation Fund

Description	Dollars
Total compensation – alive claimants	*616,234,442*
Total compensation – deceased claimants	*64,282,112*
Total compensation – family members	*40,251,015*
Total for past economic losses and Dependants	*79,567,230*
Minimum $100 payment	*925,000*
Offset for Red Cross compensation	*(42,000,000)*
Total Expected Compensation	**759,259,799**
Expected Claims Experience Premium payments	*74,394,917*
Provision for adverse deviations	*128,345,284*
Total Compensation Fund	**$962,000,000**

Past Economic Loss and Dependants' Fund

189. The Pre-1986/Post-1990 Settlement calls for a sub-fund to be established out of which compensation for past economic losses as well as compensation to dependants will be paid. The main purpose of this sub-fund is to ensure that if the claims for past economic losses are greater than the assumed totals, plus an allowance for adverse deviations, there will be no negative impact on the main compensation fund. Therefore, the lump sum amounts payable for all other forms of compensation under the Settlement Agreement are protected from any deviations in economic based claims.

190. The expectation for total claims arising from past loss of income, past loss of services in the home and dependants of deceased HCV Infected Class Members is shown in Table 9 above as $79,567,230. This amount is based on an assumption that the limits for compensation based on income loss (paragraphs 141 and 146) will be removed.

191. The Pre-1986/Post 1990 Settlement calls for 23.3% of any compensation payable under the $78,545 option for those who died from HCV prior to 1999 to be paid out of the past Economic Loss and Dependants Fund. The total expected compensation for claimants who elect the $78,545 option is $5,319,572. The portion expected to be paid out of the Past Economic Loss and Dependants Fund is therefore $1,239,460.

192. This brings the total expected compensation payable from the Past Economic Loss and Dependants Fund to $80,806,690.

193. Additional funds were added to this to provide a margin against adverse deviations (that is, in case the actual claims exceed the amount assumed based on the actuarial assumptions) equal to $12,293,309 (approximately 15.2% of the expected claims). This results in a total sub-fund of $93,100,000.

194. The expected claims are calculated based on an assumption that the courts will approve removing the provisions where past loss of income will only recognize a maximum of $75,000 per year in income and that 70% such past loss of income is paid. These two limitations also affect the amount of compensation payable to dependants where the amount is based on income. There are no limitations applied on the amount of compensation to be paid for loss of services in the home, whether that is a past loss payable to the personal representative or is the basis for determining the compensation payable to the dependants.

The Main Compensation Fund

195. All compensation other than for past economic losses and amounts payable to dependants will be paid out of the main compensation fund. After creating the sub-fund for past economic losses and dependants, there will be $868,900,000 in the main compensation fund.

196. The total expected compensation to be paid out of the main compensation fund is $678,453,109 with an additional $74,394,917 of Claims Experience Premium payable if the courts later approve.

197. Until such time as the courts approve payment of a Claims Experience Premium, there is $190,446,891 of funds available as a provision for adverse deviations. This represents approximately 28.1% of the expected compensation payable.

198. If the courts approve the payment of the full amount of Claims Experience Premium, the total expected compensation will be $752,848,026, leaving a provision for adverse deviation of $116,051,974. This represents approximately 15.4% of the total expected compensation.

199. We should also examine the impact of the Dynamic Non-Segregated Family Benefits Fund on the main compensation fund. The expected compensation payable to family members is calculated based on the amount contained in Schedule C3 to the Settlement Agreement. If there is any additional amount payable to the HCV infected Class Members as a result of the Dynamic Non-Segregated Family Benefits Fund, it is because the actual amounts paid were less than the expected amount.

An Alternate Approach to Calculation of Compensation

200. Class counsel adopted a different approach to the calculation of compensation amounts throughout the negotiations. They started by increasing the assumed class size by 15% and then determining the expected compensation payments. The balance of the fund provided a provision for adverse deviations. Provided the distribution of the assumed class of 5,619 members is the same as I have used, the process of adjusting the assumed members by 15% and then determining the compensation produces the same mathematical result as determining expected compensation based on an assumed 5,619 class members and then adding 15%.

Sufficiency of the Fund

201. The Pre-1986/Post-1990 Settlement calls for a single contribution to the compensation fund from Canada for $1,023,475,575. Of this, $962,000,000 is for compensation to the Class Members and $20,000,000 is for administration costs. The balance is for class counsel fees, their disbursements and taxes on those amounts.

202. Under the agreement, I understand that the amounts for items other than class member compensation are capped and that there is no ability to encroach on the funds for Class Members without prior approval from the courts. Therefore, I conclude that there is no risk of insufficiency for Class Member compensation arising from administration expenses or class counsel fees.

203. The Pre-1986/Post-1990 Settlement stipulates that Canada will fund a total of $962 million for the compensation fund. There are no additional funds payable. Any risk of insufficiency is borne by the Class Members. If there are any funds remaining once all claims have been paid, they will be refunded to Canada.

204. As discussed above under Compensation Fund, the Main Compensation Fund includes a provision for adverse deviation of approximately 15.4% of the expected total compensation. In other words, the total amount of compensation payable would need to exceed the expected amount by more than 15.4% before there would be an insufficiency.

205. Further, if the total compensation does exceed the expected claims by more than 15.4%, there is an additional buffer through the Claims Experience Premiums. This provides an additional 10.9% of provision for adverse deviation in the Main Compensation Fund.

206. The Claims Experience Premium was established so that the bulk of the present value of compensation could be paid out up front with confidence that there would almost certainly be sufficient funds to pay compensation at that level. This greatly reduces the risk that early claimants receive more compensation than would be available for later claimants.

207. The risk of fund insufficiency arises because we do not know precisely what the eventual claims for compensation will be. The determination of the total compensation fund (the $962 million) necessarily involved the use of assumptions about the future. Whenever assumptions are used, it is virtually guaranteed that the eventual reality will be different from the assumptions. As experience unfolds, it may result in lower or higher total compensation payments than we expect. From the perspective of the fund, these are called experience gains and losses.

208. Higher total compensation payments than we expect results in an experience loss to the fund, or an adverse deviation from expected results. Because there is no allowance for additional funding in the future, prudence demands that the compensation fund include a provision for potential adverse deviations.

209. That is not to say that experience will result in a loss. It is likely that some of the future experience will result in gains and some in losses. The risk to the Class Members and the fund is whether the cumulative effect of all the deviations from the assumptions results in a loss, or adverse deviation, that exceeds the provision for adverse deviations.

210. This section examines the type of events that might occur and quantifies the effect that they would have on the total compensation payable.

211. Because of there being two funds – a main compensation fund and a separate sub-fund for the past economic losses and dependants amounts, and because the risk of insufficiency is contained within each fund, I will discuss each of these funds separately.

The Main Compensation Fund

212. There are relatively few items that could cause a deviation from the total expected compensation under the Main Compensation Fund. The main items which will result in experience deviations are:

- the number of approved HCV infected Class Members; and
- their current disease stage, including whether they are alive or deceased.

213. There are also a number of secondary items which will give rise to experience deviations. These are:

- the year of birth of the HCV Infected Class Members in relation to the disease stage – in other words, whether the distribution by disease stage is reasonably similar at all ages, as it is with the 1986-1990 class members;

- the percentage of claimants related to the HCV Infected Class Members who died prior to 1999 who elect the $78,545 option;
- the size and make up of the family members;
- the percentage of deceased HCV Infected Class Members who are found to have died as a result of HCV; and,
- the percentage of claims which will involve a claim for uninsured funeral expenses.

214. I have determined the financial effect of changing some of the assumptions involved in calculating the expected total compensation.

215. ***Number of Alive Class Members***: If the number of alive Class Members increases by 100, and the disease distribution of those 100 alive Class Members is the same as the assumed initial disease distribution, the total expected compensation payments will increase by $15,092,000.

216. ***Number of Deceased Class Members:*** If the number of deceased Class Members increases by 100, and the distribution by disease stage and cause of death is the same as the assumed initial disease distribution, the total expected compensation payments will increase by $9,210,000.

217. ***Number of HCV Deceased Class Members:*** If 100 of the 374 Class Members who are assumed to have died from other than HCV are found to have died as a result of HCV, and the distribution between before and after January 1,1999 is the same as the assumed initial disease distribution, the total expected compensation payments will increase by $10,270,000.

218. ***Disease Distribution of Alive and Deceased Claimants:*** I considered the effect if the initial disease distribution of the HCV infected Class Members is the same as set out in the assumptions but with 10% of those at each disease level actually being one level more advanced. In other words, where we assume that there are 377 HCV infected Class Members at level 4, we would take 38 of them and assume instead that those 38 are at level 5. We would also take 10% of the 1,529 alive members at level 3 (153) and assume they are at level 4. This would result in level 4 claimants increasing by 153 and decreasing by 38, giving 377 + 153 - 38 = 492 claimants. With this change in the initial disease distribution, the total expected compensation payments will increase by $25,395,000.

219. The amounts shown in the preceding paragraphs can be adjusted on a pro rata basis to show the effect of deviations involving a different number of claimants. For example, if there are 75 additional Class Members who are alive, the increase in expected compensation would be 75/100 x $15,092,000 = $11,319,000.

220. If the deviation is a reduction rather than the increase shown, the amount can be subtracted from the total expected compensation. For example, if there are 75 fewer Class Members who are alive, the decrease in expected compensation would be $11,319,000.

221. The financial effect of the deviations includes the expected effect on the Claims Experience Premium. I have not split that amount out since it is less than 10% of the amounts shown. However, it should be recognized that in reality, differences in actual experience from that assumed will result in changes to the expected Claims Experience Premium amounts.

222. Table 11 shows the effect of combining these amounts in various ways, the total effect on the provision for adverse deviation and the resulting funds available to make the Claims Experience Premium payments. In this table, I have shown the various changes as being cumulative. So, on the last line in the table, the amounts shown assume that all of the deviations shown in the previous lines have also occurred. Note that in the first line I show the effect of 150 fewer alive Class Members, and on the last line, I show the effect of 500 more alive Class Members. The total effect is an increase in the alive Class Members of 350. It should be noted this last line in the table exhausts the provision for adverse deviations and results in a reduction to the funds available for the Claims Experience Premium.

Table 11 – Effects of Some Possible Deviations in Experience– Main Compensation Fund

Change in Assumption	Expected Financial Effect	Total Expected Compensation	Remaining Funds for Claims Experience Premium	Remaining Provision for Adverse Deviation
Total Expected Compensation		**$678,453,000**	**74,395,000**	**116,052,000**
Decrease by 150 alive members	$(22,638,000)	655,815,000	74,395,000	138,690,000
Increase by 200 deceased members	18,420,000	674,235,000	74,395,000	120,270,000
Increase HCV related deaths from 38% to 50% for 1095 deceased members (131 additional HCV related deaths)	13,454,000	687,689,000	74,395,000	106,816,000
15% of all class members are 1 stage more advanced than assumed	38,093,000	725,782,000	74,395,000	68,723,000
Increase by 500 alive members	75,460,000	793,696,000	67,658,000	0

Actuarial Opinion Regarding Sufficiency – Main Compensation Fund

223. Before I can offer an opinion about the sufficiency of the compensation fund, I must be able to offer an opinion regarding the assumptions I have used in my work. Most of the assumptions used in determining the total expected claims were employed on the instruction of counsel for Canada and are not of my choosing.

224. Nevertheless, actuaries are trained to evaluate assumptions, even those which are from outside their apparent area of expertise. This evaluation does not necessarily get to the issue of whether an assumption is a good one, but more to whether there is an obvious reason to believe that it is a poor assumption. I have reviewed the assumptions on which I was given instruction and there is nothing of which I am aware that would suggest any of the assumptions are inappropriate. While I did indicate a concern regarding the assumption for the number of deceased Class Members, the assumption used results in a more conservative (higher) estimate of the total compensation fund and therefore it actually strengthens my opinion regarding the sufficiency of the compensation fund.

225. It is my opinion based on the information provided to me and my training, that the assumptions employed in the evaluation of the total expected claims are reasonable and appropriate.

226. As stated previously, whenever assumptions are employed, the actual experience will differ from those assumptions. As a result, the actual compensation that will be paid out will be either more or less than the amounts I have calculated.

227. Based on the information provided to me and my experience as an actuary, it is my opinion that the deviations in experience have a very small probability of exhausting the provision for adverse deviations. It follows that there is an even smaller chance of exhausting both the provision for adverse deviations and the expected Claims Experience Premium amount due to adverse deviations from the assumptions.

The Past Economic Loss and Dependants Fund

228. There are more items that could cause a deviation from the total expected compensation under the Past Economic Loss and Dependants Fund than there are under the Main Compensation Fund. The main items which will result in experience deviations are:

- the number of approved HCV infected Class Members;
- their current disease stage, including whether they are alive or deceased;
- the percentage of deceased HCV infected Class Members who are found to have died as a result of HCV; and,
- the percentage of Class Members who have experienced a past loss of income;
- the annual amount of lost income and the number of years of loss;
- the percentage of Class Members who have experienced a past loss of services in the home;

229. There are also a number of secondary items which will give rise to experience deviations. These are:

- the year of birth of the HCV infected Class Members in relation to the disease stage – in other words, whether the distribution by disease stage is reasonably similar at all ages, as it is with the 1986-1990 class members;
- the percentage of claimants related to the HCV infected Class Members who died prior to 1999 who elect the $78,545 option;
- the percent of total disability claimed by Class Members who have suffered a loss of services in the home;

230. I have determined the financial effect of changing some of the assumptions involved in calculating the expected total compensation payable from the Past Economic Loss and Dependants Fund.

231. **Number of Alive Class Members:** If the number of alive Class Members increases by 100, and the disease distribution of those 100 alive Class Members is the same as the assumed initial disease distribution, the total expected compensation payments will increase by $928,000.

232. **Number of Deceased Class Members:** If the number of deceased Class Members increases by 100, and the distribution by disease stage and cause of death is the same as the assumed initial disease distribution, the total expected compensation payments will increase by $3,991,000.

233. **Number of HCV Deceased Class Members:** If 100 of the 374 Class Members who are assumed to have died from other than HCV are found to have died as a result of HCV, and the distribution between before and after January 1,1999 is the same as the assumed initial disease distribution, the total expected compensation payments will increase by $5,415,000.

234. **Percent of Class Members With a Past Loss of Income**: The expected compensation for past loss of income is based on the experience of the claims under the 1986-1990 Settlement. The assumption is that 14% of Class members under age 65 at levels 4 and 5 will have a loss of income, rising to 19% at level 6. If there is to be a material difference from the assumptions, I would expect that it would be for fewer claims for lost income in relation to the 1986-1990 class. For the past 7 years, those in the 1986-1990 class have known that if they accept a loss of income for reasons related to their infection with HCV, there is compensation available. Those in the Pre-1986/Post-1990 class have not had that assurance and so, on average, would be more likely to attempt to keep working longer than a person in the 1986-1990 Class. I have estimated the effect of an additional 5% of the assumed Class Members at levels 4 to 6 having incurred a loss of income. The total expected compensation payments would increase by $11,000,000.

235. **Average Amount of Lost Income:** Based on the assumed class size and disease distribution, the expected number of Class Members with a loss of income claim is 256. The credibility to be attached to the amount of average income loss from 256 people is at best moderate. As a result, the chance of a large deviation in this assumption is greater than for most other assumptions used. On the other hand, the average lost income amount under the 1986-1990 Settlement is significantly greater than the average wage in Canada. Therefore, the assumption for the average amount of lost income already reflects an amount that is greater than average wages in Canada. I have calculated if the average lost income amount is 10% greater than that assumed ($38,000 compensation amount for each year of lost income), the total expected compensation payments would be expected to increase by $3,270,000.

236. **Percent of Class Members With a Past Loss of Services in the Home:** The expected compensation for past loss of services in the home is based on the experience of the claims under the 1986-1990 Settlement. The assumption is that 36% of Class members under age 65 and 50% of those over 65 at levels 4 and 5 will have a loss of income, rising to 49% under 65 and 68% after 65 at level 6. The assumed amount of the loss is $13,000 per annum, representing 91% of the maximum amount payable. If there is to be a material difference from the assumptions, I would expect that it would be for more claims in relation to the 1986-1990 class. There is no independent and verifiable proof required under the Pre-1986/Post-1990 Settlement for a past loss of services claim. While this is similar to the proof requirements under the 1986-1990 Settlement, the difference is that the 1986-1990 class members who claim a past loss would be expected to also establish an ongoing loss in the future. Under the Pre-1986/Post-1990 Settlement, all future loss of services in the home are paid as part of the lump sum present values, so there is no requirement for establishing an ongoing inability to perform work around the home. I have estimated the effect of an additional 5% of the assumed Class Members at levels 4 to 6 having incurred a loss of services in the home. The total expected compensation payments would increase by $3,700,000.

237. The amounts shown in the preceding paragraphs can be adjusted on a pro rata basis to show the effect of deviations involving a different number of claimants. For example, if there are 75 additional Class Members who are alive, the increase in expected compensation would be 75/100 x $928,000 = $696,000.

238. If the deviation is a reduction rather than the increase shown, the amount can be subtracted from the total expected compensation. For example, if there are 75 fewer Class Members who are alive, the decrease in expected compensation would be $696,000.

239. In Table 12, I have shown the various changes as being cumulative. So, on the last line in the table, the amounts shown assume that all of the deviations shown in the previous lines have also occurred.

Table 12 – Effects of Some Possible Deviations in Experience– Past Economic Loss and Dependants Fund

Change in Assumption	Expected Financial Effect	Total Expected Compensation	Remaining Provision for Adverse Deviation
Total Expected Compensation		**$80,807,000**	**$12,293,000**
Decrease by 150 alive members	$ (1,400,000)	79,407,000	13,693,000
Increase by 200 deceased members	8,000,000	87,407,000	5,693,000
Increase HCV related deaths from 38% to 50% for 1095 deceased members (131 additional HCV related deaths)	7,100,000	94,507,000	(1,407,000)*
Increase Loss of Income claims by 5,000 per annum for all claimants at levels 4 to 6	4,300,000	98,807,000	(5,707,000)*
Increase loss of services in the home claims by 10% of claimants at levels 4 to 6	7,400,000	106,207,000	(13,107,000)*

* If the events summarized herein were all to occur, compensation payments would cease at $93,100,000. There is no situation in reality where the provision for adverse deviation can be negative.

240. During the settlement negotiations, I recognized the potential for relatively greater adverse deviations arising from the economic loss items. It was agreed that this risk should be contained through the creation of a separate sub fund. By limiting the total amount of economic loss claims that will be paid, the expected sufficiency of the Main Compensation Fund can be maintained.

241. Under the Past Economic Loss and Dependants Fund, the total compensation is capped at $93,100,000. If total claims reach that amount, compensation will cease to be paid.

242. In the event that the Past Economic Loss and Dependants Fund encounters a shortfall of assets while there is a surplus in the Main Compensation Fund, the Pre-1986/Post1990 Settlement, in section 2.07(3), provides a mechanism for funds to be transferred from the main fund. This may only be done if the sufficiency of the main fund will not be compromised and is subject to prior court approval.

243. To reduce the chance of the $93,100,000 cap being reached, there is an additional buffer built into the Pre-1986/Post-1990 Settlement which is not reflected in Table 12. There are two limits imposed on the compensation payments for loss of income claims and for any dependant compensation based on a loss of income. The maximum net income recognized is $75,000 and 70% of the loss is eligible for payment unless there is court approval to change or remove those limits. I do not have sufficient information to be able to quantify the amount of expected compensation that would be held back under those limits. I have prepared a rough estimate that the amount would be about $6 million.

244. The expected compensation amounts shown in Tables 9 and 12 are based on the removal of these limits. Therefore, this approximate $6 million is an additional amount which will assist in the sufficiency of the Past Economic Loss and Dependants Fund.

Actuarial Opinion Regarding Sufficiency – Past Economic Loss and Dependants Fund

245. It is my opinion based on the information provided to me and my training, that the assumptions employed in the evaluation of the total expected claims under the Past Economic Loss and Dependants Fund are reasonable and appropriate.

246. As stated previously, whenever assumptions are employed, the actual experience will differ from those assumptions. As a result, the actual compensation that will be paid out will be either more or less than the amounts I have calculated.

247. Based on the information provided to me and my experience as an actuary, it is my opinion that the deviations in experience under the Past Economic Loss and Dependants Fund may be significant and may result in the exhaustion of the provision for adverse deviations.

248. The greatest risk of insufficiency is from:

(1) more deaths than assumed as a result of HCV, giving rise to more compensation payable to dependants than was assumed; and

(2) more claims than assumed for past loss of services in the home.

249. In my opinion, the sufficiency of this fund will largely depend upon the level of scrutiny employed by the administrator and the amount of evidence the administrator is permitted to require from Class Members prior to:

(1) approving a deceased claim as having been caused by HCV; and

(2) paying compensation for past loss of services in the home.

250. I do not have sufficient data to be able to quantify the effect of the income limit of $75,000 imposed on the past loss of income and dependant claim amounts. However, the provision whereby only 70% of a loss based on income is paid out pending a future judicial review will reduce the risk of insufficiency.

251. Based on the information provided to me and my experience as an actuary, it is my opinion that the Past Economic Loss and Dependants Fund is most likely to be sufficient to pay all compensation amounts provided the administrator is able to and does impose appropriate adjudication of the claims filed. Regardless, if an issue of sufficiency does develop, it will be contained within the Past Economic Loss and Dependants Fund and will not affect the ability to provide compensation to Class members for non-economic items.

Actuarial Certification

252. I hereby certify that:

1. In my opinion, the actuarial methods and assumptions employed are appropriate for the purpose of this affidavit;

2. While I have a number of reservations about the Class Member data provided, my reservations are mainly with respect to individual member characteristics. When combined with the assumptions used, the data is reasonable and appropriate for purposes of determining the total compensation fund and for evaluating the fund's sufficiency;

3. The calculations were prepared in accordance with the Canadian Institute of Actuaries' Standards of Practice effective as of 1 January 2004;

4. This affidavit has been prepared and my opinions given in accordance with accepted actuarial practice.

SWORN BEFORE ME at the City of Toronto, in the Municipality of Metropolitan Toronto, in the Province of Ontario on January 26th, 2007.

A Notary Public in and for the province of Ontario

PETER GORHAM

This is Exhibit "A" mentioned and referred to in the affidaivit of:

PETER GORHAM

Sworn before me this 26th day of January, 2007.

Cynthia Koller

A Notary Public in and for the province of Ontario

Exhibit "A" – Curriculum Vitae of Peter J. M. Gorham

Professional Designation

Fellow, Canadian Institute of Actuaries

Fellow, Society of Actuaries

Employer

Morneau Sobeco, Partner

Education

1972 - 1976: University of Toronto, B.Sc.

- Majoring in Actuarial Science and Computer Science

1973 - 1980 Actuarial studies

- Attained ASA (Associate, Society of Actuaries) in 1977
- Attained FSA (Fellow, Society of Actuaries) and FCIA (Fellow, Canadian Institute of Actuaries) in 1980

Employment

1968 – 1972 Microsec 69 Limited

- Summer employment as a pension administrator

1973 – 1976 Crown Life Insurance

- Summer and part-time employment as an actuarial assistant for U.S. group insurance and pensions

1976 – 1978 Crown Life Insurance

- Full-time employment as an actuarial student working with U.S. group insurance and pensions

1978 – 1998 Aon Consulting - (formerly MLH + A inc and K. G. Brown Associates)

- Pension and Actuarial consultant providing advice to corporate clients on their pension plans
- 1987, K. G. Brown merged with MLH + A inc.
- 1989, appointed principal of MLH + A inc.
- 1997, MLH + A inc merged with Aon Consulting

1998 – present Morneau Sobeco

- Pension and Actuarial consultant providing advice to corporate clients on their pension plans and expert testimony in legal proceedings

Responsibilities

- Pension and group insurance consulting to corporations. Clients range from small (under 25 employees) to large (over 1,000 employees)
  - Design and implementation of pension plans, including plan documentation, design of administration and employee communications
  - Interpretation of plan terms and applicable law for specific situations clients face
  - Costings and valuations of pension plans and benefits.
  - Advice and valuations of pension and benefit obligations for funding and accounting purposes
  - Advice and costings for union negotiations
  - Advice and costings for pension and benefit issues in corporate mergers and acquisitions
  - Employee communications
- Pension and group insurance consulting to Multi-Employer plans. Clients are trusteed multi-employer pension and benefit plans
  - Design and implementation of pension plans, including plan documentation, design of administration and employee communications
  - Design and implementation of pension plan and group insurance plan amendments
  - Interpretation of plan terms and applicable law for specific situations clients face
  - Costings and valuations of pension plans and benefits
  - Member communications
- Expert Witness services
  - Family law valuations to determine the value of pensions (prior to 1999)
  - Present value of future income and future disability cost increases (prior to 1999)
  - Valuation of lost benefits in cases of wrongful termination or retirement
  - Valuation of life estates
  - Valuation of present value of future support payments (prior to 1999)
  - Certifications of criminal rate of interest

- Expert testimony provided to
  - Employment Standards Tribunal
  - Unified Family Court
  - Ontario Court (General Division)

- Education and training of actuarial assistants and pension administrators. Direct the preparation of summaries and explanations of current issues for professionals.

Professional Associations and Committees

- Canadian Institute of Actuaries
- Society of Actuaries
- Association of Canadian Pension Managers
- Canadian Pension and Benefits Conference
- Society of Actuaries, Education and Examination Committee 1981-1990
  - Writing and marking of actuarial examinations for Canadian pension topics
  - 1986 - 1990 was chairperson for Canadian Pension exam (Part 10) and also responsible for recommending new topics and study material
- Canadian Institute of Actuaries, Continuing Professional Development Committee, Chairperson, 1991 – 1994
  - Responsible for designing standards for continuing professional development
- Canadian Institute of Actuaries Program Committee, 1989 - 1993
  - Design program and recruit speakers for CIA conferences
- Canadian Institute of Actuaries Task Force on proposed pension standards requiring plan advisors to report non-compliance to regulators – 2003 – present
- Canadian Institute of Actuaries Committee on Relations With Other Professions on Pension Matters, 2004 –2005
- Pension Review Council, 1988 – 1994
  - Industry group comprised of largest pension consulting firms and legal firms in Canada
  - Provide advice to regulators and liaison between industry and pension regulators

- Multi-Employer Benefit Plan Council of Canada (MEBCO)
  - Multi-Employer industry group to provide advice to regulators and act as liaison between plan trustees and regulators
  - Founding director, 1992 – 1993
- Humber College, Centre for Employee Benefits, Industry Advisory Committee, 1988 - 1994
- Capital Accumulation Plans Industry Task Force advising the Joint Forum of Market Regulators regarding guidelines for Capital Accumulation Plan Administration, 2002-2004

Publications

- K. G. Brown Memorandum, author 1985 – 1987
  - Newsletter of current issues for clients and friends of the company
- MLH + A Actualities, editor 1989 – 1994
  - Newsletter of current issues for clients and friends of the company
- Canadian Benefits Administration Manual, editor 1989 – 1994
  - Looseleaf service published by Carswell for pension and benefits plan administrators
- Benefits Canada: "Ode to Insurance Rating", December 1994, with J. M. Norton
- Benefits Canada: "Safety in Numbers", December 1995, with David Glover
- Benefits Canada: "Great Expectations", August 1996, with Robert Brunelle
- Benefits Canada: "Paying for the Bills", December 1996, with Keith Morrallee
- Benefits Canada: "Adventures in Compensation – Profit Sharing Plans", May 1999
- DC Pension Members' Newsletter, Morneau Sobeco: "What is Long Term?", July 1999
- Morneau Sobeco Vision: "Retirement Trends in Canada – An Overview", Oct 1999, with Fred Vettese
- DC Pension Members' Newsletter, Morneau Sobeco: "What's up With My Investments?", Apr 2000
- The Canadian Institute: "Using Technology for Efficient, Convenient Pension Communication", Jul 2000
- Benefits Canada: "Balancing Act" – An Alternate View of Risk for DC Pensions, Jan 2001
- Morneau Sobeco Vision: "Our Inaugural DC Survey Results – Plan Members Speak Out", Mar 2001, with Fred Vettese
- Benefits Canada: "Viewpoint – Searching for a Safe Harbour", Oct 2001

- Benefits Canada: "Investment Information for DC Plan Members", Oct 2002
- Benefits and Pension Monitor: "Testing DC Members, Can They Make the Grade?", Feb 2004
- Morneau Sobeco Vision: "Retirement Trends in Canada – 5 Years Later", Feb 2004, with Fred Vettese
- Benefits & Pension Monitor: "Governance Audits", Apr 2005

Seminars and Conferences

- "Pension Issues around the World - Canada" - Society of Actuaries, San Diego, 1988
- "Pension Adjustments and RRSP Contributions" - CCH/ACPM Conference, Toronto, 1988
- "Why Bother With Defined Benefit Plans" - Richard DeBoo Conference, Toronto 1990
- "Pension Fund Investment Management and the New Rules" - ACPM Conference, Vancouver, 1991
- "Pension Fund Investment Management" - Canadian Association of University Business Officers, Montreal, 1991
- "Pension Legislation - A Cross-Canada Review" - Richard DeBoo Payroll Conference, Toronto, 1991
- "Family Law Act and Pensions" - Estate Planners Council of Hamilton, Hamilton, 1991
- "Pension Plan Design for the 1990's" - MLH + A Client Seminar, Hamilton, 1992
- "Pension Reform Across Canada" - Richard DeBoo Payroll Conference, Toronto, 1992
- "Pension & Benefits Checklist" - Carswell - Employment Law Update, Toronto, 1992
- "Pension Act Compliance" - Canadian Institute of Actuaries, Montreal, 1993
- "Continuing Professional Development" - Canadian Institute of Actuaries, Montreal, 1993
- "Tax Assisted Retirement Savings" - Carswell Payroll Conference, Toronto, 1993
- "Benefits Basics - Funding Group Insurance Plans" - Benefits Canada and Canadian Pension & Benefits Conference, Toronto, 1995
- "Demographics and the Social Security Crunch" - MLH + A Seminar, Toronto, 1996
- "Actuarial Issues" - Seminar for Continuing Professional Development of Life Underwriters Association of Canada, Toronto, January - February 1997
- "Pension Trends and Predictions" - Morneau Sobeco Trends and Projections Seminar, September 1999
- "Retirement Planning" – Benefits Canada DC Plan Summit, January 2000

- "Using Technology for Efficient, Convenient Pension Communication", The Canadian Institute, Jul 2000
- "Effective Tax Strategies for Pensions in Canada" – Fundamentals of Canadian Employee Benefits, International Foundation of Employee Benefits Plans, August 2000
- "Pension Trends and Predictions" - Morneau Sobeco Trends and Projections Seminar, September 2000
- "Saying Good Bye to Boomers – Demographics and Our Benefits System" – HRPAO Conference, November 2000
- "Plan Members Speak Up" – Benefits Canada DC Plan Summit, January 2001
- "Pension Governance – Course 2" – Federated Press, Course Leader with Eilonwy Morgan, April 2001
- "Retirement Planning" – HRMA/Worldatwork Conference, June 2001
- "Pension Trends and Predictions"- Morneau Sobeco Trends and Projections Seminar, September 2001
- "Fundamentals of Pension Governance", Pre-Conference workshop, Canadian Institute National Forum of Pension Governance, with Elizabeth Boyd, January 2002.
- "Pension Governance – A Strategy" - Morneau Sobeco Emerging Trends Seminar, April 2002
- "Pension Liability: Do You Know What Your CFO Is Doing Today?" – Federated Press workshop, Pension Governance Conference, June 2002
- "Fundamentals of Pension Governance in Canada" – Canadian Institute Course, co-leader with Elizabeth Boyd, July 2002
- "Pension Trends and Predictions" - Morneau Sobeco Trends and Projections Seminar, September 2002
- "Fundamentals of Pension Governance in Canada" – Canadian Institute Course, co-leader with Elizabeth Boyd, November 2002
- "Impact of Pension Funds on Financial Statements" – Federated Press Conference on Forestalling Pension Fund Shortfalls, Session Chair and Presenter, March 2003
- "Pension Plan Financial Risks on Corporate Earnings" – Federated Press Conference on Forestalling Pension Fund Shortfalls, Post Conference workshop, March 2003
- "Changing Face of Governance" - Morneau Sobeco Emerging Trends Seminar, April 2003 and June 2003
- "Fundamentals of Pension Governance in Canada" – Canadian Institute Course, co-leader with Elizabeth Boyd, July 2003
- "Pension Trends and Predictions"- Morneau Sobeco Trends and Projections Seminar, September 2003

- "Governance Roundtable" – Morneau Sobeco Roundtable discussion, November 2003
- "Negotiating Pension and Benefits" – panel member, Lancaster House, Bargaining in the Broader Public Sector, November 2003
- "Pension Governance – Performing a Governance Audit" – Federated Press Pension Governance Conference, with Andrew Harrison, April 2004
- "Pension Plans at Risk" - Morneau Sobeco Emerging Trends Seminar, April 2004
- "Fundamentals of Pension Governance in Canada" – Canadian Institute Course, co-leader with Elizabeth Boyd, July 2004
- "Pension Trends and Predictions"- Morneau Sobeco Trends and Projections Seminar, September 2004
- "Investment Risk Roundtable" – Morneau Sobeco Roundtable discussions, November/December 2004
- "Pension Governance – Performing a Governance Audit" – Federated Press Pension Governance Conference, with Sonia Mak, April 2005
- "Measures of Defined Contribution Plan Success" – Canadian Pension & Benefits Institute Fundamentals Series, April 2005
- "Emerging Trends for Pension Plans" – Morneau Sobeco Emerging Trends Seminar, May 2005
- "Pension Trends and Predictions"- Morneau Sobeco Trends and Projections Seminar, September 2005
- "Essential Skills for Pension Committee Members" – Federated Press, Course Leader, February 2006 and June 2006
- "Pension Governance – Performing a Governance Audit" – Federated Press Pension Governance Conference, with Bethune Whiston, March 2006

Other Professional Activities

- Wrote and presented brief to Ontario Finance Committee regarding reform of pension legislation, 1986
- Co-ordinated seminar and preparation of report to Pension Commission of Ontario and Ministry of Finance regarding pension reform proposals, 1989
- Participated in seminars and assisted in analyzing and commenting on proposed changes to Income Tax Act, as part of Pension Review Council, 1989 – 1992

- Humber College, Centre for Employee Benefits, Faculty
  - Certified Employee Benefit Certificate course, 1983 – 1990
  - Pension Plan Administration Certificate, Courses 2 and 3, 1990 – present
    - "Understanding Actuarial Reports", 1990 – 1993
    - "Pension Plan Cash Flows", 1994 – 1998
    - "Financial Calculations - Pension Administration Basics", 1998 – present
    - "Dollars and Cents of Pensions – Perspectives on Investing", 2002 - present

Community Service

- Heart & Stroke Foundation of Ontario, Hamilton-Wentworth Chapter
  - Member, Board of Directors and Chair, Corporate Committee, 1992 - 1998
  - President, 1995-1997
- Heart & Stroke Foundation of Ontario
  - Provincial Development Committee, 1997 - 1998
- Rotary Club of Hamilton, 1993 – 1998
  - Member, Easter Seals Committee, 1993 - 1997
  - Weekly Reporter for newsletter, 1995 - 1998
  - Sergeant-at-Arms and Director, 1996 - 1997
- Ancaster Community Food Drive
  - Co-chair, 1994 – 1998
- Rosedale Presbyterian Church, Toronto
  - Elder, 1985 – 1990
  - Sunday School Teacher, 1982 - 1984
  - Co-chair, Vietnamese Refugee Sponsorship Committee, 1979-1981
- St. Andrew's Presbyterian Church, Ancaster
  - Elder, 1991 – 1998
  - Board of Managers, 1991-1993
  - Sunday School Teacher, 1993 - 1998
- Presbyterian Church in Canada, Pension Board
  - Member, 1986 – 1991

- Presbyterian Church in Canada, Pension Task Force, 1988 - 1990
  - Review plan and design new benefit structure
- Presbyterian Church in Canada, Pension Task Force, 1994 - 1996
  - Review funding of plan and determine alternative sources of funds
- Neighbour to Neighbour Centre, Hamilton
  - Board of Directors, 1997 – 1998
- Chandos Lake Property Owners Association
  - Board of Directors and Treasurer, 1996 - 2003
- Rotary Club of Whitby Sunrise, Whitby, 2000 – present
  - Board of Directors, 2002 – present
  - Weekly Reporter for newsletter, 2001 – 2003
  - President elect, 2003 – 2004
  - President, 2004 – 2005

This is Exhibit "B" mentioned and referred to in the affidaivit of:

PETER GORHAM

Sworn before me this 26th day of January, 2007.

Cynthia Koller

A Notary Public in and for the province of Ontario

Exhibit B – Summary of the Pre-1986 & Post-1990 Compensation Amounts

This summary is taken from the Pre-1986/Post-1990 Settlement and includes items which have a bearing on the results of my work. The Pre-1986/Post-1990 Settlement terms include other details about compensation which are not material to the results presented herein. Amounts are expressed in 2007 dollars, except where indicated otherwise. All payments amounts are indexed from their 2007 levels to the date of payment to reflect inflation unless indicated otherwise.

In the following summaries, the specific section reference in the Pre-1986/Post-1990 Settlement is shown in brackets.

Alive HCV Infected Person (2.04)

A lump sum amount is payable based on the person's year of birth and the highest disease level attained at the time of claiming. The amounts are set out in Schedule C1 to the Pre-1986/Post-1990 Settlement. Table B.1 is an extract of those amounts for specific years of birth.

The lump sum from Schedule C1 is reduced by 8/11^{ths} of the compensation received by the HCV Infected person from the Red Cross Settlement.

In addition to this lump sum, compensation may be payable for past economic losses. If the HCV Infected person has any defined family members, they are eligible for family benefits.

Table B.1 – Compensation to Alive HCV Infected Class members (extract)

	Disease Level					
Year of Birth	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
2016	8,453	183,223	259,264	281,866	289,146	309,346
2006	8,453	169,319	255,151	313,129	323,167	348,787
1996	8,453	155,416	251,039	344,393	357,188	388,229
1986	8,453	140,110	241,382	351,119	375,187	410,585
1976	8,453	120,434	216,971	322,222	353,528	391,504
1966	8,453	98,104	186,476	288,662	323,680	366,664
1956	8,453	76,470	150,662	244,414	283,515	334,181
1946	8,453	58,003	113,699	189,940	232,506	292,244
1936	8,453	43,039	82,969	138,939	180,304	246,681
1926	8,453	32,166	62,820	99,736	141,536	211,569
1916	8,453	26,483	51,252	68,355	113,383	186,926
1906	8,453	23,850	46,189	50,734	96,566	174,210
1900 or earlier	8,453	22,464	44,545	47,080	90,098	168,483

Deceased HCV Infected Class Member – Death Prior to 1999 (3.02)

If death was not due to infection with HCV, there is no compensation payable, except as described in the last paragraph of this section.

If death was due to infection with HCV and the person was at levels 4 to 6, compensation is payable in one of two forms as elected by the personal representative of the HCV Infected Class Member, the family members and dependants. All amounts in this section are in 1999 dollars and are indexed from their 1999 levels to the date of payment to reflect inflation.

1. A lump sum of 8/11^{ths} of $45,000 plus up to 8/11^{ths} of $5,000 for any uninsured funeral expenses is payable to the personal representative. Family and dependant benefits are also payable.

2. As an alternative, if all parties agree, a lump sum of 8/11^{ths} of $108,000 is payable to the personal representative, family members and dependants. No additional amounts are payable.

The above amounts are reduced by 8/11^{ths} of the total compensation received by recipients from the Red Cross Settlement.

Regardless of the cause of death, where a primarily infected haemophiliac who was also infected with HIV, died prior to 1999 and there is agreement from the personal representative, family members and dependants, a lump sum of $64,800 is payable to the personal representative, family members and dependants. No additional amounts are payable.

Deceased HCV Infected Class Member – Death After 1998 (3.03)

A lump sum amount is payable based on the highest disease level attained at the time of death. The amounts are set out in Schedule C2 to the Pre-1986/Post-1990 Settlement. Table B.2 is an extract of those amounts.

Table B.2 – Compensation to Estates of Deceased HCV Infected Class Members

Highest Disease Level Attained by HCV Infected Class Member Prior to Death					
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
$ 8,453	$ 23,480	$ 46,959	$ 46,959	$ 97,832	$ 76,098

These lump sums are reduced by 8/11^{ths} of the compensation received by the HCV Infected person from the Red Cross Settlement.

In addition to this lump sum, compensation may be payable for past economic losses.

If death was as a result of infection with HCV and the person was at levels 4 to 6, the following amounts are also payable.

1. Up to 8/11^{ths} of $5,000 for any uninsured funeral expenses is payable to the personal representative

2. If the HCV Infected person had any family members, they are eligible for family benefits.

3. If the HCV Infected person had any dependants, they are eligible for dependant benefits.

The $5,000 for uninsured funeral expenses is in 1999 dollars and is indexed from its 1999 level to the date of payment to reflect inflation.

Damages for Past Loss of Income (2.05)

Where an HCV Infected Class Member (alive or deceased after 1998) at disease level 4 or higher has had a loss of net income as a result of infection with HCV, 70% of 8/11^{ths} of the loss in each year prior to filing the claim is payable. Annual income for the period prior to loss is based on a three year average, to be established through income tax returns. The Pre-1986/Post-1990 Settlement specifies the standard deductions (such as income taxes, Canada Pension Plan contributions, etc) to be considered in determining the amount of net income for each year. In each year of loss, the net income for that year is deducted from the average pre-loss amount. Lost income may only be claimed for the period prior to the person attaining age 65.

The maximum amount of annual gross income to be considered for the pre-loss income amount is $75,000. A pro rata adjustment to gross income for each year of loss is prescribed.

The amount of net lost income is indexed from the year of loss to the year of payment.

The 70% applied to the amount payable and the $75,000 income limit may be increased or removed following court approval.

Damages for Past Loss of Services in the Home (2.06)

Where an HCV Infected Class Member (alive or deceased after 1998) at disease level 4 or higher has been unable in the past to perform household duties as a result of infection with HCV, compensation for the loss is payable based on the number of hours of such

services that could not be performed. Compensation is made to a maximum of 8/11^{ths} of $12 per hour for 20 hours per week. That produces a maximum annual amount of compensation of $9,076.

The amount for loss of services is indexed from the year of loss to the year of payment.

Loss of services in the home may not be paid for the same period of time as a loss of income is paid.

Family Members (4.02)

Each family member of alive HCV Infected Class Members and of HCV Infected Class Members whose death was as a result of HCV, will be paid a lump sum as set out in Schedule C3A to the Pre-1986/Post-1990 Settlement. Table B.3 is an extract of that Schedule.

Table B.3 – Compensation to Family Members

	Disease Level of the Approved HCV Infected Class Member						
Relation	**Deceased from HCV**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
Spouse	21,762	0	727	2,310	5,527	8,499	13,893
Child under 21	13,057	0	436	1,386	3,316	5,099	8,336
Child over 21	4,352	0	145	462	1,105	1,700	2,779
Parent	4,352	0	145	462	1,105	1,700	2,779
Sibling	4,352	0	145	462	1,105	1,700	2,779
Grandparent	435	0	15	46	111	170	278
Grandchild	435	0	15	46	111	170	278

These lump sums are reduced by 8/11^{ths} of the compensation received by the family member from the Red Cross Settlement. As a result, there are some amounts which will or may result in compensation payable of less than $100. There is a provision (see below) to pay a minimum of $100.

There is a notional fund which provides that if the total amount paid to family members is less than the expected amount, any excess will be distributed among the HCV Infected persons.

Dependants of Deceased HCV Infected Persons (4.04)

Where an HCV Infected Class member whose death was as a result of HCV was providing for dependants at the time of death, those dependants will receive compensation for loss of support or loss of services as a result of the death.

Dependant compensation is payable for the remaining period of dependency, but not beyond the life expectancy of the HCV Infected person, where that life expectancy is determined without regard to the death and HCV infection.

The amount payable is based on the annual loss and is independent of the number of dependants. Where the HCV Infected Class Member died prior to age 65, the annual loss is 70% of the net income determined in a manner similar to a loss of income, including the 70% and $75,000 limits. This annual loss is payable during the period of dependency and prior to the HCV Infected Class member attaining age 65. Alternatively, a loss of services in the home is payable. After age 65, a loss of services is payable.

The lump sum amount is calculated by applying present value factors to the amount of annual loss. These factors are set out in Schedule C4 and C5 of the Pre-1986/Post-1990 Settlement. A Court Approved Protocol will be developed to set out the mechanics of that calculation.

The resulting lump sum amount is as of the date of death. Schedule C6 of the Pre-1986/Post-1990 Settlement contains factors which are used to adjust the lump sum amount from the date of death to the date of payment.

Claims Experience Premium (5.07)

Many of the lump sum amounts have been reduced by 10% to create an additional provision for adverse deviations in the claiming. There is a provision to pay these amounts to the Class Members if there are sufficient funds and following court approval.

The following items were subjected to the 10% reduction and therefore are eligible to receive a Claims Experience Premium if one is paid.

1. Lump sum amounts paid to alive HCV Infected Class Members at levels 2 to 6:

2. Lump sum amounts paid to the personal representative of a deceased HCV Infected Class Member, including the entire lump sum under option (2) for those deceased prior to 1999;

3. The $68,400 amount payable if elected in respect of an HCV Infected Class Member who was also infected with HIV and who died prior to 1999; and

4. for greater certainty, the lump sum payable for uninsured funeral expenses is not included, since the 10% reduction was not applied to it.

$100 Minimum Amount of Compensation (5.13)

If any amount payable to an individual under the Pre-1986/Post-1990 Settlement is less than $100, an amount of $100 will be paid instead.

This is Exhibit "C" mentioned and referred to in the affidaivit of:

PETER GORHAM

Sworn before me this 26th day of January, 2007.

Cynthia Koller

A Notary Public in and for the province of Ontario

Exhibit C – Summary of the 1986-1990 Compensation Amounts

This summary is taken from the Plan terms for the 1986 to 1990 class and includes items which have a bearing on the results of the valuation. The Plan terms include other details about benefits which are not material to the results presented herein. Amounts are expressed in 1999 dollars, except where indicated otherwise. Most of these payments amounts are indexed from their 1999 levels to the date of payment to reflect inflation.

In the following summaries, the specific section reference of the Plan is shown in brackets.

$10,000 for HCV infection [4.01(1)(a)]

A compensation payment of $10,000 is made upon a claimant being approved for the Plan.

$20,000 – positive PCR test [4.01(1)(b)]

A payment of $20,000 is made upon a claimant delivering a positive PCR test report. Prior to July 2002, this benefit was split into two parts, with $15,000 paid immediately and $5,000 subject to a "holdback" until such time as it could be demonstrated that the fund was sufficient to support payment of the full $20,000. The holdback amounts were authorised by the court to be paid effective July 2002.

$30,000 – Non-bridging fibrosis [4.01(1)(c)]

This payment is available to all claimants who have developed non-bridging fibrosis or have proceeded beyond that stage. As well, claimants who have received or meet a protocol for Compensable HCV Drug Therapy (whether or not treatment is undertaken) are eligible for this benefit.

A claimant may elect to waive this payment and to receive instead a loss of income or loss of services benefit. The decision as to which benefit to receive may be deferred as long as the claimant wishes.

Loss of Income [4.02]

Each claimant under the age of 65 who was in receipt of earned income and who suffers a loss of income caused by their infection with Hepatitis C is entitled to periodic annual payments provided:

1. the claimant is at the bridging fibrosis level or beyond, or
2. the claimant is at the non-bridging fibrosis level and is unable to work more than 20% of the usual work week and has waived the $30,000 lump sum payment described above.

The amount of benefit is equal to 100% of the amount of lost income determined after normal payroll deductions (net income). The lost income is based on the average annual net income during the three prior years. Benefit amounts are indexed from the middle of the three year period used to determine the amount of loss to the year of payment based on the indexing rate under the Canada Pension Plan. There is a holdback whereby any lost income over $300,000 (1999 level) will not be paid until the courts are satisfied that the fund assets are sufficient to make such payments. Prior to October 2004, the holdback was based on a lost income amount of $75,000. Also, prior to October 2004, there was a holdback equal to 30% of the lost income payable to claimants at the non-bridging fibrosis stage.

Loss of Services [4.03]

Each claimant who normally performed household duties in their home and is unable to do so as a result of their infection with Hepatitis C is entitled to periodic annual payments for loss of services provided:

1. the claimant is at the bridging fibrosis level or beyond, or
2. the claimant is at the non-bridging fibrosis level and has waived the $30,000 lump sum payment described above.

The amount of benefit is equal to $12 per hour of homemaker assistance required to a maximum of $240 per week.

A claimant is not entitled to loss of services benefits if they are receiving loss of income benefits.

$65,000 – Cirrhosis [4.01(1)(d)]

A payment of $65,000 is made upon a claimant being diagnosed with cirrhosis.

$100,000 – Decompensation/Cancer/Liver Transplant [4.01(1)(e)]

A payment of $100,000 is made upon a claimant being diagnosed with liver decompensation or hepatocellular cancer or has received a liver transplant. There are some other conditions which will give rise to this benefit, but they are not modeled separately in the MMWG report.

Costs of Care [4.04]

A claimant who meets the conditions for the $100,000 payment above and who has incurred costs for care which are not covered by any public or private health plan is entitled to reimbursement for all reasonable costs to a maximum of $50,000 per year.

Drug therapy [4.05]

A claimant who receives compensable HCV drug therapy (interferon, ribavirin or such other treatment approved by the courts) is entitled to be paid $1,000 for each completed month of such therapy.

Uninsured Treatment & Medication [4.06]

A claimant who receives a generally accepted treatment and medication for HCV which is not otherwise recoverable from a private or public health plan is entitled to be reimbursed for all such reasonable costs.

Out-of-pocket Expenses [4.07]

A claimant who incurs out-of-pocket expenses due to infection by HCV which are not otherwise recoverable from a private or public health plan is entitled to be reimbursed for all such reasonable costs. This includes amounts for travel, hotels, meals, telephone and other similar expenses attributable to seeking medical advice or treatment and medication as well as costs incurred in establishing a claim under the Plan.

Secondarily Infected Persons

A spouse or child of an HCV infected claimant (or an HCV infected person who has opted out of the Plan) where that person was infected with HCV as a result of that relationship may make their own claim for compensation under the Plan. To be eligible, the spouse must file a claim within three years of the date the primarily infected person submits their claim. There is no such limitation on claims submissions by children. Benefits to secondarily infected persons are the same as for primarily infected persons.

HCV related death before 1 January 1999 [5.01]

If an approved HCV infected person died prior to 1 January 1999 as a result of HCV, their personal representative and/or family members are entitled to receive either:

1. $50,000 plus any uninsured funeral expenses incurred to a maximum of $5,000 plus the compensation to dependants and approved family members as outlined below; or,
2. $120,000 plus any uninsured funeral expenses incurred to a maximum of $5,000.

HCV related death after 1 January 1999 [5.02]

If a claimant dies after 1 January 1999 as a result of HCV, any uninsured funeral expenses incurred to a maximum of $5,000 and compensation to dependants and approved family members as outlined below shall be paid. This is in addition to any other benefit entitlements the claimant has under the Plan.

Compensation to Dependants [6.01]

Following the death of a person as a result of HCV, the dependants of that person are entitled to receive

1. Loss of Support – from the date of death to the date the infected person would have attained age 65, dependants will be paid an annual amount equal to the net income of the deceased person, reduced by 30% to account for the personal living expenses of the deceased.

2. Loss of Services – from the date of death of the infected person, dependants will be paid an annual amount equal to $12 per hour to a maximum of $240 per week as compensation for loss of services in the home of the deceased. The Plan contains no reference as to how long these payments are to be made, however we understand that the administrator is paying this loss of services for the life expectancy of the deceased, calculated according to the Canadian Life Tables as published by Statistics Canada.

Where the dependants are entitled to both loss of support and loss of services, only one is payable. Should the loss of support payments cease upon the date the deceased would have attained age 65, then loss of services payments are payable thereafter.

The amount of benefit payable is to be split among all dependants in such manner as the dependants or administrator determines.

Compensation to Approved Family Members [6.02]

Following the death of a person as a result of HCV, the family members of that person are entitled to receive

a. $25,000 for the spouse

b. $15,000 for each child under the age of 21 at the date of death

c. $ 5,000 for each child aged 21 or over at the date of death

d. $ 5,000 for each parent

e. $ 5,000 for each sibling

f. $ 500 for each grandparent

g. $ 500 for each grandchild

$240,000 – HIV Secondary Infections [4.08]

HCV claimants who are also infected with HIV resulting from a relationship (partner or child) of a primarily infected person who is an approved Extraordinary Assistance Plan recipient will receive compensation from the EAP program. No additional benefits are available from this Plan unless the total of all benefits to which the claimant (including any dependants and approved family members) would have otherwise been entitled exceeds $240,000.

Additional Benefits for Haemophiliacs with Hepatitis C

The following benefits are payable upon a claimant's election instead of the above listed benefits, and are only available to an approved haemophiliac claimant. Section references are to the Haemophiliac Plan.

Haemophiliac infected with both HCV and HIV [4.08(2)]

If the claimant is a primarily infected haemophiliac and is also infected with HIV a lump sum amount of $50,000 may be elected instead of all other compensation under the Plan and is in full satisfaction of all claims.

Death prior to 1 January 1999 [5.01(4)]

If an approved HCV infected person died prior to 1 January 1999 as a result of HCV, their personal representative and/or family members are entitled to receive either:

1. $50,000 plus any uninsured funeral expenses incurred to a maximum of $5,000 plus the compensation to dependants and approved family members as outlined above; or,
2. $120,000 plus any uninsured funeral expenses incurred to a maximum of $5,000; or,
3. $72,000 if the claimant was a primarily infected haemophiliac and was also infected with HIV and if all dependants and other family members agree to accept this amount in full satisfaction of all claims.

This is Exhibit "D" mentioned and referred to in the affidaivit of:

PETER GORHAM

Sworn before me this 26th day of January, 2007.

Cynthia Koller

A Notary Public in and for the province of Ontario

Exhibit D – Summary of the Actuarial Assumptions

Actuarial assumptions are required for two purposes in the work done for this affidavit. In order to determine the total expected compensation and to evaluate fund sufficiency, I had to make assumptions about the make-up of the Class Members as a group. These assumptions are described in the following section "Determining the Total Expected Compensation".

I also had to make assumptions in order to calculate the lump sum present value amounts equivalent to the compensation payable under the 1986-1990 Settlement. These are described below in the section "Determining the Lump Sum Present Values".

Determining the Total Expected Compensation

The following describes the actuarial assumptions used in determining the present values for compensation based on modelling the future expected compensation under the 1986-1990 Settlement.

Disease Stages and Cohort Assumptions

The Compensation Plan uses descriptions of the levels of the disease that differ from the stages used in the MMWG Report. In particular, we understand that non-bridging fibrosis normally occurs sometime during the stages identified as Fibrosis 1 and Fibrosis 2 in the MMWG Report. By assuming that non-bridging fibrosis occurs coincident with Fibrosis 1, we are including a level of conservatism in the results. The following table shows the terms which are deemed to be equivalent for purposes of applying the MMWG stages to the Plan's compensation levels.

Table D.1 – Hepatitis C Disease Stages and Levels

MMWG Stage	MMWG Stage Description	Compensation Plan Levels	Compensation Plan Description
F0(RNA-)	Fibrosis Stage 0 – RNA negative	1	Claimants who have cleared the virus
F0(RNA+)	Fibrosis Stage 0 – RNA positive	2	PCR test positive
F1	Fibrosis Stage 1	3	Non-Bridging Fibrosis
F2	Fibrosis Stage 2		
F3	Fibrosis Stage 3	4	Bridging Fibrosis
F4	Cirrhosis	5	Cirrhosis
HCC	Hepatocellular Cancer	6	Cancer
Decomp	Decompensated cirrhosis		Liver decompensation
Transplant	Liver Transplant		Liver Transplant
Death	Liver related death		Death

The initial disease distribution of the Class members was developed from the 1986-1990 class members' distribution projected forward by 10 years using the transition rates from the MMWG Report.

Table D.2 – Assumed Initial Disease Level Distribution of the Claimants

Disease Stage	Disease Level	Proportion
F0(RNA-)	1	22.5%
F0(RNA+)	2	12.5%
F1	3	22.3%
F2	3	10.1%
F3	4	8.0%
F4	5	18.9%
Liver Decompensation	6	3.8%
Liver Transplant	6	1.5%
HCC	6	0.5%

Determining the Lump Sum Present Values

The following describes the actuarial assumptions used in determining the present values for compensation based on modelling the future expected compensation under the 1986-1990 Settlement.

Disease Progression

The progress of a claimant through the various disease stages is modelled using probabilities. The transition probabilities used in our calculations are taken from the MMWG Report and are the same as were used in the MMWG Report. These represent the probability of transition to another disease stage during the course of one year. These probabilities are adjusted for the effects of successful treatment and for the effects of HIV on fibrosis progression in the same manner as was done in the MMWG Report.

Table D.3 - Transition Probabilities

From Stage	To Stage	Transition Probability
F0(RNA-)	F1	0.0%
F0(RNA+)	F0(RNA-)	0.6%
F0(RNA+)	F1	7.1%
F1	F2	7.8%
F2	F3	19.2%
F3	F4	24.2%
F4	Decompensation	4.6%
Decompensation	Transplant	3.3%
F1	HCC	0.01%
F2	HCC	0.01%
F3	HCC	0.1%
F4	HCC	2.1%

With the exception of non-HCV related mortality (Canadian Life Tables, 1997, which are based on age and gender), the transition probabilities do not vary by age, gender or duration of infection.

There are a number of treatments available for Hepatitis C which, if successful, will slow down or arrest progression of the disease. For the purposes of the MMWG model, treatment is assumed to be considered for patients at three stages - F0(RNA+), F1 and F4. At each of these stages a percentage of the patients are given treatment, and a percentage of those treated respond successfully to the treatment. These percentages are:

Table D.4 - Treatment Probabilities

Stage	Receive Treatment	Successful Response Among Those Treated	Successful Response Among all Patients
F0(RNA+)	14.0%	42.0%	5.8%
F1	80.0%	50.0%	40.0%
F4	75.0%	25.0%	18.8%

A patient who has been successfully treated is assumed to be subject to significantly reduced transition probabilities. These reduced probabilities apply at all stages up to liver decompensation for the patient's future life but does not affect the transition rates to cancer (HCC).

Patients who did not receive treatment or where the treatment was not successful are eligible for treatment at one of the subsequent stages where treatment is offered. However, the MMWG model only provided for treatment to be given to patients prior to age 65. While a person over age 65 who was successfully treated in the past will continue to reap the benefits of the treatment, no new treatments are assumed after 65 for patients who have not had a successful treatment.

Other Assumptions

Table D.5 - Mortality Assumptions

Assumption	Description
Mortality from all causes other than HCV	Canada Life Tables 1997 – for calculating Joint mortality, it has been assumed that, on average, Females are 3 years younger than males

Mortality due to HCV from Level 6 – Decompensation	13.8%
Mortality due to HCV from Level 6 – HCC (cancer)	86.0%
Mortality due to HCV from Level 6 - liver transplant	
- first year	16.9%
- thereafter	3.4%
Unisex ratio	Based on claimant's gender. Where gender not stated, 49.6% male.
Dependant life expectancy	For purposes of determining joint life expectancy for dependant claims, the HCV Infected Claimant is assumed to experience mortality at the rate of 50% of female mortality and 50% of male mortality. The joint dependant is assumed to experience mortality at 50% of male mortality for a person 3 years older plus 50% of female mortality for a person 3 years younger. The effect of this assumption is to assume that of all primary claimants, half are male and half are female, with a spouse of the opposite gender where the male is assumed to be 3 years older than the female.

Table D.6 - Economic Assumptions

Assumption	Description
Future return on assets	4.38%
Inflation rate (for indexing benefit amounts)	2.25%
Net discount rate[1]	2.08%
Income taxes	Taxes on the lump sum payment are assumed to be nil. An average gross-up of 2.8% was made on all lump sum amounts to compensate for income taxes on the investment income of the portion of lump sum amounts which represent the present value of the benefits which would be payable in the future under the 1986-1990 Settlement.

Pension Index

The following are the indexing rates which have been used to increase the payments under the Plan. For 2007 and thereafter, payments are assumed to be indexed by the assumed rate of inflation. These historical indexing rates are based on fact and are the same for all sets of assumptions.

Table D.7 – Historical Indexing Rates

Year	Indexing Rate
2000	1.57%
2001	2.54
2002	3.01
2003	1.63
2004	3.21
2005	1.72
2006	2.26

[1] The net discount rate is determined by dividing one plus the return on assets by one plus the inflation rate. This is (1.0438 / 1.0225) = 1.0208 which gives 2.08%. This recognizes the compounding effect of inflation and net discount rates.

Assumptions Affecting Specific Compensation Benefits

The following describes the actuarial assumptions used in modelling a claim under the 1986-1990 Settlement for purposes of calculating a lump sum present value. All dollar amounts shown are for compensation under the 1986-1990 Settlement. A person who submits a new claim will immediately receive all lump sum payments based on their current disease level as well as all prior levels.

Table D.8 – Assumptions about Eligibility and Timing of Compensation Payments

Benefit Payment	Assumption
$10,000 for HCV infection	
• Incidence	When claim approved
• Payment	Immediate
$20,000 – positive PCR test	
• Incidence	F0(RNA+) stage
• Payment	Immediate
$30,000 – Non-bridging fibrosis	
• Incidence	At F1 stage
• Proportion electing	95% elect
• Payment	Immediate
Loss of Income – Level 3	
• Incidence	At F1 stage
• Proportion claiming	3% elect under age 65 0% elect over age 64
• Benefit amount	$38,000
• Payment	annually to age 65 then receive loss of services
Loss of Services – Level 3	
• Incidence	At F1 stage
• Proportion claiming	2% elect under age 65 5% elect over age 64
• Benefit amount	$13,000
• Payment	annually for life

Benefit Payment	Assumption
Loss of Income – Levels 4 and 5	
• Incidence	F3 and F4
• Proportion claiming	14% under age 65
	0% over age 64
• Benefit amount	$38,000
• Payment	annually to age 65 then receive loss of services
• Retroactive benefits	none
Loss of Income – Level 6	
• Incidence	Decomp, HCC, Transplant
• Proportion claiming	19% under age 65
	0% over age 64
• Benefit amount	$38,000
• Payment	annually to age 65 then receive loss of services
Retroactive Benefits	none
Loss of Services – Levels 4 and 5	
• Incidence	F3 and F4
• Proportion claiming	36% under age 65
	50% over age 64
• Benefit amount	$13,000
• Payment	annually for life
• Retroactive Benefits	none
Loss of Services – Level 6	
• Incidence	Decomp, HCC, Transplant
• Proportion claiming	49% under age 65
	68% over age 64
• Benefit amount	$13,000
• Payment	annually for life
• Retroactive benefits	none
$65,000 – Cirrhosis	
• Incidence	F4 stage
• Payment	Immediate
$100,000 – Decompensation/ Cancer/Transplant	
• Incidence	At decomp or HCC
• Payment	Immediate

Benefit Payment	Assumption
Cost of Care	
• Incidence	Level 6
• Proportion claiming	20% each year
• Benefit amount	$11,000
• Payment	once each year
Drug Therapy	
• Incidence	F2 and beyond
• Proportion claiming	
▪ Level 2	14%
▪ Level 3	80%
▪ Level 4	75%
• Benefit amount	$11,000
• Payment	Upon transition to the indicated level.
Uninsured Treatment & Medication	
• Incidence	F1 to decomp, HCC, transplant
• Proportion claiming	6%
• Benefit amount	$4,000
• Payment	each year
Out-of-pocket expenses	
• Incidence	New claimants and all at levels 3 to 6
• Proportion claiming	25% of new claimants 6% at levels 3 to 6
• Benefit amount	$1,500
• Payment	each year
Secondarily Infected Persons	
• Incidence	All secondarily infected persons are assumed to be reflected in the class data provided.
HIV Secondarily Infected Persons	Not applicable

Benefit Payment	Assumption
HCV related death before 1999	
• Proportion claiming	48% elect 50,000+ option
	52% elect $120,000 option
• Payment for $50,000+ option	100% claim $4,500 funeral expenses
	100% claim $47,000 of family benefits
	19% claim loss of support of $26,600 in 2005 to 65 and $13,000 loss of services after
	81% claim loss of services of $13,000 in 2005 payable for life expectancy of deceased claimant
HCV related death after 1998	
• Funeral expenses	100% claim $4,500
• Family members	100% claim $48,000
• Loss of Support	10% prior to 65 claim $26,600 loss of support payable to 65 and $13,000 loss of services after
• Loss of Services	40% prior to 65 and 50% after 65 claim $13,000 loss of services payable for life expectancy

This is Exhibit "E" mentioned and referred to in the affidaivit of:

PETER GORHAM

Sworn before me this 26th day of January, 2007.

Cynthia Koller

A Notary Public in and for the province of Ontario

Exhibit E - Summary of Class Member Data

Source of Data

In May 2005, KPMG prepared a report based on the claims received to 12 April 2005 under the Red Cross Settlement – a total of 5,788 responses from primarily infected claimants, of which 5,372 are reported as having been accepted as class members. An additional 214 secondarily infected claimants were reported with 170 accepted as class members. This is a total of 5,542 approved class members under the Red Cross Settlement out of a total of 6,002 claimants.

A file of claimant data was provided to us by the Department of Justice of the Government of Canada who received it from Mr. David Harvey, one of the class counsel to the Pre-1986/Post-1990 class. I understand that this data was compiled by KPMG based upon claims submitted under the Red Cross Settlement.

The file of class member data provided to us includes 6,019 people. We were not advised as of what date that file was prepared, but it appears to be as of some time after May 2005 and prior to December 2005.

Class Counsel undertook a second survey of class members in late 2005 and on 23 January 2006, provided a preliminary file with 3,134 responses received as of an unspecified date. We do not know how many surveys were sent out, but we were advised that it was to all members of the class. I presume that includes the 5,372 accepted class members identified by KPMG and possibly most or all of the 6,019 members in the December data file.

Limitations of the Data

In the KPMG Data, the individual claimants were provided on an anonymous basis. There was no information in that file to indicate whether and which claimants had been accepted, rejected or were pending a decision to be an approved class member.

There was no identification included in either set of data that would let us link the information in the second data file with the information in the KPMG Data.

The data does not provide any indication of the individual's disease stage. For those who have died, there is no indication of the cause of death.

Consequently, I have reservations about the sufficiency and reliability of both sets of data. As a result, I have not used the data for this report except for the purpose of determining a distribution by year of birth. In my opinion, the KPMG Data is sufficient and reliable for such a purpose.

Initial Age Distribution of the Class

Based on the KPMG Data provided, the following summarizes the age distribution as of January 2006.

Table E.1 - Initial Age Distribution

Age Range		Proportion
0	20	0.6%
20	30	2.6%
30	40	5.7%
40	50	24.9%
50	60	28.8%
60	70	15.9%
70	80	14.0%
80	90	6.5%
90	120	1.0%

This is Exhibit "F" mentioned and referred to in the affidaivit of:

PETER GORHAM

Sworn before me this 26th day of January, 2007.

Cynthia Koller

A Notary Public in and for the province of Ontario

Exhibit F - Glossary of Terms Used

HIV Plan	A compensation program for people who are secondarily infected with HIV under which benefits are payable from the 1986 to 1990 Plan.
HIV Co-infection	Describes a person who is infected with both HCV and HIV. There are additional benefits available under the 1986 to 1990 Plan to haemophiliacs who are HIV co-infected.
Joint Committee	The committee established under section 9.01 of the 1986 to 1990 Plan.
Joint Committee Report	Report of the Joint Committee Relating to the 1986-1990 Hepatitis C Trust Fund, June 30 2005, by J.J. Camp, Q.C., Bonnie Tough, Michel Savonitto and Harvey Strosberg, Q.C.
KPMG Data	The electronic file of claimant information under the Red Cross Settlement compiled by KPMG and provided to me on 12 December 2005
KPMG Report	The report prepared by KPMG dated May 2005 summarizing the claimants under the Red Cross Settlement as of 12 April 2005.
Level	A disease level under the Plan. There are six disease levels. Levels are related to stages as modelled in the MMWG Report.
MMWG Report	The report of the Medical Model Working Group entitled "Estimating the Prognosis of Canadians Infected With the Hepatitis C Virus Through the Blood Supply, 1986-1990 – Second Revision of HCV Prognostic Model Incorporating Data From the Compensation Claimant Cohort", May 2005 by Murray Krahn MD MSc FRCPC, Peter Wang, MD PhD, Qilong Yi MD PhD, Linda Scully MD FRCPC, Morris Sherman MD FRCPC, Jenny Heathcote MD FRCPC

1986-1990 Settlement	Transfused HCV Plan and the Hemophiliac HCV Plan as attached to and forming part of the judgement of the Honourable Mr. Justice Warren K. Winkler dated 22 October 1999, (court file number 98-CV-141369). These documents set out the benefits payable to the 1986 to 1990 claimants.
Pre-1986/Post-1990 Settlement Agreement	The Pre-1986/Post-1990 Hepatitis C Settlement Agreement as signed by class counsel representing the plaintiffs and Canada on 14 December 2006.
Primarily Infected Person	A person who was infected with the HCV virus as a result of receiving blood during the class period.
Secondarily Infected Person	A person who is a child or spouse of a primarily infected person and who was infected with HCV as a result of that relationship.
Stages	A disease stage as modelled under the MMWG report. Stages are related to the compensation levels under the Plan.
Supplemental Data	An electronic file of claimant information compiled by class counsel based on some initial survey responses mailed to claimants under the Red Cross Settlement. This data constitutes a partial sample of the potential claimants under the Pre-1986/Post-1990 Settlement.
Transfused Cohort	The group of approved claimants who are not haemophiliacs.

#1
Sworn January 26, 2007

No. C976108
Vancouver Registry

IN THE SUPREME COURT OF BRITISH COLUMBIA

B E T W E E N :

**EDWARD KILLOUGH, PATRICIA NICHOLSON, IRENE FEAD,
DAPHNE MARTIN, DEBORAH LUTZ and MELANIE CREHAN
as representative plaintiffs**

PLAINTIFFS

- and -

THE CANADIAN RED CROSS SOCIETY, HER MAJESTY THE QUEEN IN RIGHT OF BRITISH COLUMBIA, AND THE ATTORNEY GENERAL OF CANADA

DEFENDANTS

Proceeding under the *Class Proceedings Act, 1992*

AFFIDAVIT OF PETER GORHAM
(Sworn January 26th, 2007)

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