



LEGISLATIVE ASSEMBLY OF THE NORTHWEST TERRITORIES

4th Session

11th Assembly

HANSARD
Official Report
Day 23

Friday, March 10, 1989

Pages 979 - 1032

Speaker: The Hon. Red Pedersen, M.L.A.

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YELLOWKNIFE, NORTHWEST TERRITORIES

FRIDAY, MARCH 10, 1989

MEMBERS PRESENT

Hon. Titus Allooloo, Mr. Angottitauruq, Mr. Arlooktoo, Hon. Tom Butters, Hon. Nellie Cournoyea, Mr. Crow, Mr. Ernerk, Mr. Gargan, Hon. Stephen Kakfwi, Mr. Lewis, Hon. Jeannie Marie-Jewell, Mr. McLaughlin, Mr. Morin, Mr. Nerysoo, Hon. Dennis Patterson, Hon. Red Pedersen, Mr. Pollard, Mr. Pudluk, Mr. Whitford, Mr. Zoe

ITEM 1: PRAYER

---Prayer

SPEAKER (Hon. Red Pedersen): Orders of the day for Friday, March 10th, 1989. Item 2, Ministers' statements. Mr. Allooloo.

ITEM 2: MINISTERS' STATEMENTS

Ministers' Statement 26-89(1): Inuit Art Collection

HON. TITUS ALLOOLOO: Mr. Speaker, I wish to provide Members of the Legislative Assembly with an account of negotiations concerning the Inuit art collection of Indian and Northern Affairs. There are only three small collections of Inuit art, craft and artifact items remaining in the Northwest Territories which are publicly owned. Increasing community interest in having access to their own heritage has strengthened Inuit resolve to bring back art and artifact collections to the Northwest Territories.

In 1987, Indian and Northern Affairs announced the transfer of its Inuit art collection to southern museums. The previous Minister of Indian and Northern Affairs informed the Hon. Dennis Patterson, however, that the NWT would have first call on the material provided a strategy for restitution was put forward. This collection comprises an historic collection of arts and crafts, purchased and collected by the federal department, throughout the NWT, over a period of 30 years.

In November, 1988, the regional councils from Baffin, Keewatin and Kitikmeot, ICI, TFN and ITC forwarded a strategy to Indian and Northern Affairs emphasizing: 1) Inuit ownership of the collection; 2) long-term loan, exhibition and research access to parts of the collection by major southern museums and galleries; 3) museum training of Inuit; 4) support for museums and cultural centre development. It was agreed by all groups that ICI should serve as temporary trustees of the collection, once transferred. The Inuit strategy was endorsed unanimously by this 11th NWT Legislative Assembly, by formal motion at the November session.

Indian and Northern Affairs has reviewed the strategy and will be meeting with the Inuit groups this weekend in Iqaluit, to present a response. At this time, they are prepared to list major pieces which they wish to keep and turn over to the southern museums, while transferring ownership of over one half of the collection to the Inuit.

At the meeting, to be held in Iqaluit, the Inuit groups will be further consulted in the selection of pieces for southern museums and those items which will be returning to the Northwest Territories. With the Inuit as owners, the collection can be documented and conserved at the Prince of Wales Northern Heritage Centre, then returned to Eastern Arctic heritage centres such as Inuit Silatuqsarvingat and the planned Baffin cultural centre, and Cape Dorset Art Centre. Parts of the collection will also be circulated and displayed in a number of Eastern Arctic communities.

It is increasingly clear that the decision to transfer ownership to the Inuit is both a moral and political one, and not just a legal concern . The agreement of the federal government to transfer ownership to the Inuit is an important recognition that the Inuit can manage their own heritage. Qujannamiik, Mr. Speaker.

MR. SPEAKER: Thank you, Mr. Allooloo. Ministers' statements.

Ministers' Statement 27-89(1): Decentralization

HON. DENNIS PATTERSON: Thank you, Mr. Speaker. Mr. Speaker, I have already tabled amendments to the government organization policy which embody our commitment to decentralization. We will decentralize "either to allow programs and services to be delivered close to the people being served or to provide an equitable distribution of the social, economic and employment benefits of government activity throughout the Northwest Territories". We will maintain program effectiveness and efficiency in such relocations. Furthermore, we are prepared to pay a reasonable cost premium to redistribute benefits through decentralization.

AN HON. MEMBER: Hear, hear!

HON. DENNIS PATTERSON: Mr. Speaker, recently, Members have been extremely interested in how we plan to get on with decentralization. I have indicated some of the operations we are prepared to consider. Perhaps, Mr. Speaker, what will also be of interest to Members are the more detailed principles and guidelines we have developed for decentralization. These explain how the planning and decision-making will work. I will table these today.

Mr. Speaker, I am sure that once Members have considered these, they will recognize that we are serious about decentralization and its impacts. Qujannamiik.

MR. SPEAKER: Thank you, Mr. Minister. Ministers' statements. Item 3, Members' statements. Mr. Ernerk.

ITEM 3: MEMBERS' STATEMENTS

Member's Statement On Government Advertising

MR. ERNERK: Thank you, Mr. Speaker. I wish to advise Members of this House and the government of my concern regarding advertising of job openings in Nunavut. The government advertises the vast majority of its jobs only in the western NWT, and in a number of cases in the South. Mr. Speaker, as a matter of fact, in the last three weeks News North has carried five times the number of job ads than has Nunatsiaq News. Western NWT newspapers have very limited distribution in the East, and by the time some of the communities are aware of the jobs the job competitions are closed. Nunatsiaq News is the only publication that carries job ads in Inuktitut, the language of one third of the NWT's population. Mr. Speaker, why not buy News North and the Globe and Mail?

Mr. Speaker, is the government actively trying to discourage Inuit from applying for jobs, or does it just think that they are probably not qualified? Recently I was informed that the Globe and Mail published as many government job ads in a single day as the Nunatsiaq News had published in the previous two weeks. The jobs were also advertised in the western NWT, but not in the East. Mr. Speaker, I hope the Minister of Personnel gets this message.

MR. SPEAKER: Thank you, Mr. Ernerk. Your time is up for Members' statements.

AN HON. MEMBER: Hear, hear!

MR. SPEAKER: Members' statements. Mr. Gargan.

Member's Statement On Sir Alexander Mackenzie Canoe Race, Continued

MR. GARGAN: Mr. Speaker, I would like to continue from yesterday.

---Laughter

The unedited Hansard of March 9, 1989, page 1816, line 17, it was "This...", then it was stop, stop, stop.

--- Laughter

I will continue from "This". This is my community's support and contribution to this historical event. Mr. Speaker, I am grateful for this government's support for this worthy project and I know I can count on their continued support to make this event truly great. Thank you, Mr. Speaker.

MR. SPEAKER: Thank you, Mr. Gargan. Members' statements. Mr. Whitford.

Member's Statement On NWT Curling Team In The Brier

MR. WHITFORD: Thank you, Mr. Speaker. I would like to use my two minutes to call attention to a great sportsman and his team, Al Delmage and his team. Al Delmage and his team for 10 years have represented the Northwest Territories, or the North in general, in the Brier in curling and I was just given an article this morning from the Edmonton Sun of Wednesday that is bordering on being very nasty. They refer to Al as ancient. They refer to the team as fossils from the North and they go on to portray this team as being losers. Mr. Speaker, I think nothing can be further from the truth. This gentleman and his team have always considered fair play and good sportsmanship in front of winning. They have been classic examples to our young people of what sportsmanship is all about. They have represented us very well in the last 10 years and they have gone so far as to come within one shot of representing the North at the Silver Broom. I think this gentleman and his team need to be congratulated instead of being called such things as being ancient and old and things of this nature. They have taken away what, to us, should have been our moment in the sun and have trivialized it with an article like that. Just wait until Mr. Jones comes here and I will give him a piece of my mind then, sir.

MR. SPEAKER: Thank you, Mr. Whitford. Members' statements. Mr. Morin.

Member's Statement On Rabies In Yellowknife

MR. MORIN: Thank you, Mr. Speaker. I would like to make a Member's statement today on dogs and rabies in Yellowknife. I would like to commend the government on acting very fast on having dogs vaccinated in Yellowknife that may be in contact with rabies. But I would like to make sure that they keep this disease in Yellowknife and they do not let dogs travel throughout the Territories and spread the disease, especially now...

SOME HON. MEMBERS: Decentralization.

MR. MORIN: ...during the dog racing season. As other Members said, this is one thing that Yellowknife can keep and not decentralize it.

MR. SPEAKER: Thank you, Mr. Morin. Members' statements. Item 4, returns to oral questions. Ms Cournoyea.

ITEM 4: RETURNS TO ORAL QUESTIONS

Further Return To Question O141-89(1): Recovering Of Freon Containers At Garbage Dumps; And Question O167-89(1): Gases From Discarded Refrigerators

HON. NELLIE COURNOYEA: Mr. Speaker, I have a return to an oral question asked by Mr. Whitford on February 21, 1989 and Mr. McLaughlin on February 22, 1989, and although the question was not specifically put to the Department of Public Works, the reference in the notes in Hansard indicate the Department of Public Works. The question concerns the control of Freon and other refrigerants from refrigerators discarded by the Government of the Northwest Territories.

Mr. Speaker, the recovery of the small amounts of refrigerant in domestic refrigerators, which range from 12 to 16 ounces per refrigerator, is currently impractical because of the lack of commercially available recovery equipment. Furthermore, refrigerators that are disposed of usually have become unserviceable because they have lost their charge, which means the refrigerant has escaped into the atmosphere already. For these reasons, no action to prevent the escape of refrigerant from unserviceable refrigerators is being taken at this time.

However, we understand that practical, portable equipment is now being tested by the Canadian Standards Association that will enable refrigerant to be recovered and either reclaimed for further use or returned to the manufacturers for reclamation and resale. Mr. Speaker, we anticipate the equipment of at least one vendor will be available in 1989.

Implementation of a recovery program will involve training of operators and inspectors, transportation of goods classified as dangerous, and final disposal. Mr. Speaker, the Department of Public Works and Highways and the NWT Housing Corporation, as an interim measure, will not dispose of any charged refrigerators, that is those that contain refrigerant, until safe, practical means of recovery or removing the refrigerant is available. Since this will pose somewhat of a storage problem, refrigerators that have failed because the refrigerant has escaped will continue to be disposed of as previously done.

The Department of Public Works and Highways will continue to monitor the availability of equipment for the recovery and means of disposal of refrigerant so as to advise our government how to institute safe and economical control measures. Thank you, Mr. Speaker.

MR. SPEAKER: Thank you. Returns to oral questions. Mr. Kakfwi.

Return To Question O321-89(1): Responsibility For Move Of Arctic College From Fort Smith To Yellowknife

HON. STEPHEN KAKFWI: Mr. Speaker, this is in response to a question asked by Mr. Pollard on March 6, 1989. Arctic College board of governors was first established by policy in September, 1983. The board was appointed by the Executive Council and was responsible to the Minister of Education for the delivery of post-secondary education, recommending on college principles and objectives, and the development of policy to allow the college to operate effectively and efficiently. In April 1987, the board of governors was established in legislation, broadening their authority for the operation of the college.

In 1985, the college board of governors discussed the location of college headquarters with the Minister of Education and the Minister brought the conclusions of these discussions to the Executive Council. The Executive Council agreed the headquarters would be established in Yellowknife and this decision was announced by the Minister of Education in the Legislative Assembly on October 17, 1985. Thank you.

MR. SPEAKER: Thank you, Mr. Minister. Returns to oral questions. Item 5, oral questions. Mr. Morin.

ITEM 5: ORAL QUESTIONS

Question O360-89(1): Spread Of Rabies In Western Arctic

MR. MORIN: Thank you, Mr. Speaker. My question is to the Minister of Renewable Resources. Mr. Minister, what is your department doing to ensure that the rabies disease that is happening in Yellowknife is not going to spread in the rest of the Western Arctic? Especially right now while the dog mushing circuit is in full stream. As you are aware, we spent, as a government, over \$300,000 in the Eastern Arctic because of the rabies disease happening over there. Do you have anything to assure me that this disease will not be spread throughout the Western Arctic?

MR. SPEAKER: Mr. Minister.

Return To Question O360-89(1): Spread Of Rabies In Western Arctic

HON. TITUS ALLOOLOO: Mr. Speaker, the Member was correct in his Member's statement that our government acted very rapidly on the problem. There was a meeting held by my officials, city by-law officers, the RCMP and health officials on how to approach the rabies problem in Yellowknife the day after they realized that there was rabies in Yellowknife. Also, a press release was prepared and the Yellowknife B Band chief and the Yellowknife Hunters and Trappers Association were contacted. The president of the dog mushers association was contacted to inform his members that there was rabies in Yellowknife. So far we have not been informed that there are other cases of rabies aside from the two dogs that have been confirmed.

MR. SPEAKER: Supplementary, Mr. Morin.

Supplementary To Question O360-89(1): Spread Of Rabies In Western Arctic

MR. MORIN: Supplementary, Mr. Speaker. For those people that own dogs, is your department making available to them free of charge, the vaccine that they use to combat this disease?

MR. SPEAKER: Mr. Allooloo.

Further Return To Question O360-89(1): Spread Of Rabies In Western Arctic

HON. TITUS ALLOOLOO: Mr. Speaker, one of the kennels in Yellowknife is offering vaccine for the dog-owners, free of charge.

MR. SPEAKER: Mr. Morin, supplementary.

Supplementary To Question O360-89(1): Spread Of Rabies In Western Arctic

MR. MORIN: Thank you, Mr. Speaker. Supplementary. Mr. Minister, what about the other communities outside the vicinities of Yellowknife, around the lake where it may have a chance of spreading?

MR. SPEAKER: Mr. Allooloo.

HON. TITUS ALLOOLOO: Mr. Speaker, I will look into the matter and get back to the Member as soon as I can.

MR. SPEAKER: Thank you. That supplementary taken as notice. Oral questions. Mr. Whitford.

Question O361-89(1): Radiation Injuries Mentioned In WCB Report

MR. WHITFORD: Thank you, Mr. Speaker. My question will be to the Minister responsible for the Workers' Compensation Board. I am referring to the report of the WCB, 1987, and it talks about

radiation effects and injuries. There were four of them. I wonder if the Minister would be able to recall or tell me what was the nature of these radiation injuries in this report.

MR. SPEAKER: Madam Minister.

HON. NELLIE COURNOYEA: Mr. Speaker, I do not have that knowledge with me at this time but I will seek out the information and provide it to the Member.

MR. SPEAKER: Thank you, Madam Minister. The question is taken as notice. Mr. Ernerk.

Question O362-89(1): Senior Positions Vacant Within Culture And Communications

MR. ERNERK: Thank you, Mr. Speaker. Some senior positions in the GNWT to date are still vacant. My question is to the Minister of Communications. What is the status of the two positions within Culture and Communications? The positions I am referring to include deputy minister and assistant deputy minister.

MR. SPEAKER: Mr. Allooloo.

Return To Question O362-89(1): Senior Positions Vacant Within Culture And Communications

HON. TITUS ALLOOLOO: Mr. Speaker, the interviews were held for the deputy minister's position and we are doing reference checks for the position. I am hoping that from the people who applied we might be able to come up with candidates for the position for ADM. Thank you.

MR. SPEAKER: Thank you, Mr. Minister. Oral questions. Mr. Pudluk.

Question O363-89(1): Effective Date Of New Rental Rates

MR. PUDLUK: (Translation) Thank you, Mr. Speaker. This question is directed to the Minister responsible for the Housing Corporation with regard to the new rental rates that people have to pay. I wonder when this is going to go into effect.

MR. SPEAKER: Mr. Butters.

HON. TOM BUTTERS: Mr. Speaker, I do not know that a date has been identified as yet. I will take the question as notice.

MR. SPEAKER: Thank you, Mr. Minister. The question is taken as notice. Mr. Zoe.

Question O364-89(1): Deputy Minister Applicants Considered For Assistant Deputy Minister Position

MR. ZOE: Thank you, Mr. Speaker. My question is directed to the Minister of Culture and Communications. Could I ask the Minister to repeat the answer that he has given my colleague from Aivilik in terms of the ADM position? I did not quite understand how they are proceeding with that particular position. If I am correct, Mr. Speaker, what I understood was that the unsuccessful applicants for the DM position were going to be considered for the ADM position. Am I correct in assuming that? Thank you.

MR. SPEAKER: Mr. Allooloo.

Return To Question O364-89(1): Deputy Minister Applicants Considered For Assistant Deputy Minister Position

HON. TITUS ALLOOLOO: Mr. Speaker, I am willing to look at the people that had applied for the DM position when I am reviewing the assistant deputy minister position. Those who had applied for the DM position may be considered for the ADM position. Qujannamiik.

MR. SPEAKER: Thank you, Mr. Minister. Mr. Ernerk.

Question O365-89(1): Appointment Of Deputy Minister And Assistant Deputy Minister

MR. ERNERK: Mr. Speaker, a supplementary to Mr. Zoe's question. Mr. Speaker, who decides on the appointment of these two positions? Does the Minister decide on appointing the people to these two positions?

MR. SPEAKER: Mr. Patterson.

Return To Question O365-89(1): Appointment Of Deputy Minister And Assistant Deputy Minister

HON. DENNIS PATTERSON: Mr. Speaker, in keeping with the increased responsibilities assigned to the Office of Government Leader by the 11th Legislative Assembly, I have been announcing appointments of deputy ministers and have been involved in the interview process, in consultation with appropriate Ministers and the Minister of Personnel. Therefore, the appointment will be ultimately my responsibility. The assistant deputy minister position would be a decision taken by the Minister and deputy minister, in conjunction with the Department of Personnel. Thank you, Mr. Speaker.

MR. SPEAKER: Thank you, Mr. Patterson. Mr. Pudluk.

Question O366-89(1): Length Of Time For Filling Deputy Minister Position

MR. PUDLUK: (Translation) Thank you, Mr. Speaker. I would like to ask again, further to my colleague to my left, to the Government Leader. Why is it taking so long for this DM position to be filled? What is the reason? Are there so many applicants or is it that you will be shuffling your Ministers? Is that the reason? Thank you, Mr. Speaker.

MR. SPEAKER: Mr. Government Leader.

Return To Question O366-89(1): Length Of Time For Filling Deputy Minister Position

HON. DENNIS PATTERSON: Mr. Speaker, I would acknowledge that the filling of vacancies in senior positions in the Department of Culture and Communications has not moved as quickly as it should have. Mr. Speaker, unfortunately the process of advertising, when the advertising takes place widely, the period required for keeping the competition open, the time and sometimes logistics associated with interviewing candidates who may have to travel some distance for interviews, and the resulting work required to do reference checks, have taken a lot more time than we would have hoped. And I agree with the criticism that we should move more expeditiously in future. It is a valid criticism and it is a criticism well taken by this government. Thank you.

MR. SPEAKER: Thank you, Mr. Government Leader. Mr. Ernerk.

Question O367-89(1): Recommendation On Potential Appointees

MR. ERNERK: Thank you, Mr. Speaker. I would like to ask the Government Leader if the Minister of Culture and Communications has made a recommendation on the potential appointees to the positions?

MR. SPEAKER: Mr. Government Leader.

Return To Question O367-89(1): Recommendation On Potential Appointees

HON. DENNIS PATTERSON: Mr. Speaker, as the Minister has said earlier in this House, he hopes that an announcement will be made shortly respecting the appointment. The process is almost concluded, Mr. Speaker. Thank you.

AN HON. MEMBER: He did not answer the question.

MR. MORIN: Point of order.

MR. SPEAKER: Point of order, Mr. Morin.

MR. MORIN: Thank you, Mr. Speaker. The Government Leader did not answer either one of those last questions. Mr. Pudluk asked whether it...

MR. SPEAKER: Mr. Morin, you do not have a point of order. According to our Rules the Member is entitled to an answer. A Member is not necessarily entitled to the answer he wishes. You may pursue that...

AN HON. MEMBER: Shame, shame!

MR. SPEAKER: You may pursue the matter under supplementary questions, not points of order. Mr. Morin was next.

Question O368-89(1): Cabinet Shuffle And Recommendations Of Name To Cabinet

MR. MORIN: Thank you, Mr. Speaker. The question is, does it have anything to do with the cabinet shuffle that this deputy minister's position is not filled yet? The other question Mr. Ernerk asked was whether or not the Minister of Culture and Communications has recommended to the cabinet a name yet. To the Government Leader, two questions.

MR. SPEAKER: Thank you, Mr. Morin. You are correct, that is two questions. Mr. Government Leader.

Return To Question O368-89(1): Cabinet Shuffle And Recommendation Of Name To Cabinet

HON. DENNIS PATTERSON: Mr. Speaker, I apologize if I have misunderstood the honourable Members' questions. Mr. Speaker, to the question asked by Mr. Morin, no. To the question asked by Mr. Ernerk, no. Thank you.

MR. SPEAKER: Thank you, Mr. Patterson. Oral questions. Mr. Lewis.

AN HON. MEMBER: Go for it. Go for the throat.

Question O369-89(1): Recommendation Of Name For Deputy Minister Position

MR. LEWIS: To be more precise then, Mr. Speaker, this competition has taken a long time and I am referring now to the competition to fill the position of deputy minister of Culture and Communications. We have been given an explanation that there are reference checks, even though the people that have applied are well-known. My question is, has the Minister responsible for Culture and Communications recommended to the Government Leader, not to the cabinet, to the Government Leader, who he would like to have in that position?

MR. SPEAKER: Mr. Lewis, to whom was that directed? Was that directed to the Government Leader?

MR. LEWIS: My question is to the Minister responsible for Culture and Communications. Has he recommended to the Government Leader...

MR. SPEAKER: Thank you, Mr. Lewis. The question is noted; I just wanted to know to whom. Mr. Allooloo.

HON. TITUS ALLOOLOO: I will take the question under advisement.

MR. SPEAKER: The question is taken as notice. Oral questions. Oral questions. Item 6, written questions. Mr. Ernerk.

ITEM 6: WRITTEN QUESTIONS

Question W21-89(1): Advertising For Public Service Positions

MR. ERNERK: Thank you, Mr. Speaker. Mr. Speaker, my written question is to the Minister of Personnel. Could the Minister provide me with the following information concerning the advertising of positions in our public service: 1) number of ads placed in the years 1987-88, and 1988-89; 2) list of all newspapers these advertisements were placed in; 3) cost of advertising in the fiscal years 1987-88 and 1988-89; 4) number of ads that were translated into aboriginal languages in those years; 5) does the government have a northern preference policy for advertising? Thank you, Mr. Speaker.

MR. SPEAKER: Thank you, Mr. Ernerk. Written questions. Mr. Lewis.

MR. LEWIS: Mr. Speaker, I still had an oral question and my hand was up.

MR. SPEAKER: Mr. Lewis, I am sorry, I did not notice. It was called twice. Item 7, returns to written questions.

MR. LEWIS: Mr. Speaker, I seek unanimous consent to return to oral questions.

SOME HON. MEMBERS: Agreed.

MR. SPEAKER: The Member has requested unanimous consent to return to oral questions. Are there any nays? Mr. Lewis, there are no nays. We are on Item 5. Mr. Lewis.

REVERT TO ITEM 5: ORAL QUESTIONS

Question O370-89(1): Recommendation For Deputy Minister Position

MR. LEWIS: Mr. Speaker, I was very impressed with the honesty of Mr. Allooloo in the response to my question about filling the deputy minister's position in the Department of Culture and Communications. My question now is to the Government Leader. Can the Government Leader tell this House whether he has been given a recommendation on who should be the deputy minister of that department by the Minister responsible for Culture and Communications? I would not be upset if he takes it as notice.

MR. SPEAKER: Mr. Patterson.

HON. DENNIS PATTERSON: Mr. Speaker, I certainly would not want to upset Mr. Lewis so I will take the question as notice. Thank you.

MR. SPEAKER: Thank you, Mr. Patterson. The question is taken as notice. Mr. Pollard.

Question O371-89(1): Recommendation On Who Not To Hire For Deputy Minister Position

MR. POLLARD: Thank you, Mr. Speaker. To the Government Leader on the same subject, Mr. Speaker. Could the Government Leader tell the House if he has had a recommendation on who not to hire for that position? Thank you, Mr. Speaker.

MR. SPEAKER: Mr. Government Leader.

Return To Question O371-89(1): Recommendation On Who Not To Hire For Deputy Minister Position

HON. DENNIS PATTERSON: No, Mr. Speaker. Thank you.

MR. SPEAKER: Thank you. We are on oral questions. Mr. Ernerk.

Question O372-89(1): Filling Of Positions In Culture And Communications

MR. ERNERK: Mr. Speaker, my question is to the Government Leader. Are these positions ever going to be filled?

---Laughter

MR. SPEAKER: Mr. Government Leader.

Return To Question O372-89(1): Filling Of Positions In Culture And Communications

HON. DENNIS PATTERSON: Yes, Mr. Speaker. Thank you.

MR. SPEAKER: Thank you. Oral questions. Mr. Morin.

Question O373-89(1): Filling Of Positions Before Or After Cabinet Changes

MR. MORIN: Thank you, Mr. Speaker. My question is to the Government Leader. Do you expect these positions to be filled after the cabinet shuffle or before?

MR. SPEAKER: Mr. Government Leader.

Return To Question O373-89(1): Filling Of Positions Before Or After Cabinet Changes

HON. DENNIS PATTERSON: Before, Mr. Speaker.

MR. SPEAKER: Thank you. Oral questions. Mr. Morin.

Question O374-89(1): Changes In Executive Council Assignments

MR. MORIN: Thank you, Mr. Speaker. To the Government Leader. Are you still going to be shuffling positions in the Executive Council, April 1st?

MR. SPEAKER: Mr. Government Leader.

Return To Question O374-89(1): Changes In Executive Council Assignments

HON. DENNIS PATTERSON: Mr. Speaker, as I indicated, I believe, earlier to the honourable Member in answer to his question, as a result of the creation of new departments, particularly Transportation and Safety and Public Services, as well as the change of the secretariat of Energy, Mines and Resources into a full department, there will be a need to assign ministerial responsibilities consequent on those changes.

Mr. Speaker, I believe that it only makes sense that in order to avoid confusion these new assignments of responsibilities and consequential changes in cabinet assignments should be determined and announced following the budget session in order to eliminate any confusion as to who is responsible for what. Therefore, Mr. Speaker, in keeping with the original response I gave to the honourable Member, my intention would be to announce those changes immediately

after the current session is concluded. It now appears that would be later than March 31, which I had earlier anticipated. So whenever the session is concluded, Mr. Speaker, I would make an announcement shortly thereafter about new cabinet assignments, but it would be very early in the new fiscal year. Thank you, Mr. Speaker.

MR. SPEAKER: Thank you. Supplementary, Mr. Morin.

Supplementary To Question O374-89(1): Change In Executive Council Assignments

MR. MORIN: Thank you, Mr. Speaker. To the Government Leader, supplementary. It is my understanding that we are going to be working here to try to finish the budget before April 1 and we will have other work of this House to do after that. Why would you not announce whatever changes you are going to make to the Executive Council to this House once the budget is finished, prior to when we recess the House?

MR. SPEAKER: Mr. Government Leader.

Further Return To Question O374-89(1): Changes In Executive Council Assignments

HON. DENNIS PATTERSON: Well, Mr. Speaker, this is a responsibility that has been assigned to me by Members of the Legislative Assembly, which is traditionally a responsibility that is taken by a First Minister at his or her own discretion. I would reserve the right to consider the appropriate time, Mr. Speaker. I thank the honourable Member for his advice about the appropriate time but I may not be ready quite at that point. Thank you, Mr. Speaker.

MR. SPEAKER: Thank you. Oral questions.

Item 7, returns to written questions.

Item 8, replies to Opening Address.

Item 9, petitions.

Item 10, reports of standing and special committees. Item 11, tabling of documents. Mr. Kakfwi.

ITEM 11: TABLING OF DOCUMENTS

HON. STEPHEN KAKFWI: Mr. Speaker, I wish to table Tabled Document 64-89(1), a document on Education in the NWT, which is available in English and Inuktitut. The second document I wish to table is Tabled Document 65-89(1), Arctic College Headquarters Study and Recommendations on Decentralization. Thank you.

MR. SPEAKER: Thank you, Mr. Kakfwi. Tabling of documents. Mr. Patterson.

HON. DENNIS PATTERSON: Thank you, Mr. Speaker. I wish to table Tabled Document 66-89(1), Decentralization of Government Programs and Services. Thank you.

MR. SPEAKER: Thank you, Mr. Patterson. Tabling of documents. Mr. Ernerk.

MR. ERNERK: Thank you, Mr. Speaker. I wish to table Tabled Document 67-89(1), a letter from Johnny Ningeongan of Coral Harbour community education council in which he states a motion by the Keewatin Divisional Board of Education supporting a request for a grade 10 extension in the hamlet of Coral Harbour.

MR. SPEAKER: Thank you, Mr. Ernerk. Tabling of documents.

Item 12, notices of motion. Mr. Allooloo.

HON. TITUS ALLOOLOO: Mr. Speaker, I wish to give notice that on Monday, March 13, 1989, I shall move that Bill 4-89(1)...

AN HON. MEMBER: We are not on bills.

MR. SPEAKER: We are on notices of motion, Item 12. Item 13, notices of motion for first reading of bills. Mr. Allooloo.

ITEM 13: NOTICES OF MOTION FOR FIRST READING OF BILLS

Notice Of Motion For First Reading Of Bill 4-89(1): Labour Standards Act

HON. TITUS ALLOOLOO: Mr. Speaker, give notice that on Monday, March 13, 1989, I shall move that Bill 4-89(1), An Act to Amend the Labour Standards Act, be read for the first time.

MR. SPEAKER: Thank you, Mr. Allooloo. Notices of motion for first reading of bills.

Item 14, motions.

Item 15, first reading of bills.

Item 16, second reading of bills. Item 17, consideration in committee of the whole of bills and other matters: Consideration of the Matter of Arctic Contaminants; Bill 1-89(1); CR 1-89(1); Ministers' Statement 15-89(1); Tabled Documents 58-89(1) and 59-89(1); Bills 3-89(1), 7-89(1) and 10-89(1), with Mr. Zoe in the chair.

ITEM 17: CONSIDERATION IN COMMITTEE OF THE WHOLE OF BILLS AND OTHER MATTERS

PROCEEDINGS IN COMMITTEE OF THE WHOLE TO CONSIDER THE MATTER OF ARCTIC CONTAMINANTS

CHAIRMAN (Mr. Zoe): The committee will come to order. The first item of business for the committee of the whole is consideration of the matter of Arctic contaminants. Mr. Patterson.

Minister's Opening Remarks

HON. DENNIS PATTERSON: Thank you, Mr. Chairman. Mr. Chairman, I recently advised the House that all of us have every reason to be concerned about an increasing number of contaminants being found in the Northwest Territories. I mentioned our concern about the potential health risks to northern residents, to our renewable resources and to the environment if this problem is not resolved. As the chairman of a cabinet subcommittee on Arctic contaminants, I stated that the problem facing us today will not be eliminated without strong, deliberate and co-ordinated action by all levels of government, industry, the scientific community and the support of the public.

Mr. Speaker, as Members know, Canadian and international scientists involved with research on Arctic contaminants met in Ottawa last week to discuss their findings and to identify areas that may require further research. I believe there were some 40 scientists involved in those meetings.

Earlier this week, a group of scientists travelled to Broughton Island to brief the mayor, Mr. Stevie Audlakiak, and members of the hamlet council on contamination in that Baffin Island community. Fortunately, I am advised by the scientific team that there is no immediate danger to the health of Broughton Island residents. The benefits of country food, I am told, are greater than the possible risk from the PCBs that these foods contain.

Mr. Chairman, this, of course, does not mean that we should lessen our vigilance. It is imperative that we accelerate our efforts through whatever means possible to ensure that our environment is safe, not only for ourselves, but for future generations as well.

Today we have with us a number of scientists who represent various federal departments currently studying the matter of Arctic contaminants. They will provide you with the most current information available on this subject. I expect they will also indicate areas requiring further research.

Mr. Chairman, the Hon. Red Pedersen, our Speaker, has also invited leaders of the northern native organizations to be present today, in order that they may address Members on the matter of Arctic contaminants. With your permission, Mr. Chairman, I would like to have the witnesses invited into the committee of the whole for the purpose of addressing our Assembly, and once you have done so, Mr. Chairman, I would be happy to introduce them to the House. Thank you.

CHAIRMAN (Mr. Zoe): Does the committee agree that we invite the witnesses to appear before us. Agreed?

SOME HON. MEMBERS: Agreed.

---Agreed

CHAIRMAN (Mr. Zoe): Thank you. Mr. Minister, would you introduce your witnesses?

Introduction Of Witnesses

HON. DENNIS PATTERSON: Thank you, Mr. Chairman. Mr. Chairman, members of the scientific group are, from your left to your right: Mr. Garth Bangay, director of resource planning and co-ordination for the Department of Indian Affairs and Northern Development; Dr. David Kinloch, former chief medical officer of health for the NWT, who is now with the health protection branch of Health and Welfare Canada at the laboratory centre for disease control; Professor Harriet Kuhnlein, professor of human nutrition and director of the school of dietetics and human nutrition, MacDonald College of McGill University. Mr. Chairman, Mr. Bangay, Dr. Kinloch and Professor Kuhnlein will be making presentations to the House. In addition, we have Derek Muir, research scientist, Department of Fisheries and Oceans, Freshwater Institute, Winnipeg, Manitoba, Mr. Chairman. Next to him is Mr. Leonard Barrie, research scientist, atmospheric environmental services, Environment Canada, Downsview, Ontario. These two gentlemen will be available, along with the other scientists, to help answer any questions Members may have.

Mr. Chairman, we also have with us representatives from native organizations. They are, from your right to your left, Mr. Bill Erasmus, president of the Dene Nation, who will also, I believe, be speaking on behalf of the Metis Association today; Ms Mary Simon, president of the Inuit Circumpolar Conference; Mr. Stevie Audlakiak, mayor of Broughton Island.

Following the presentations by all the witnesses, Mr. Chairman, I would suggest that Members of the committee may be permitted to ask questions. Thank you.

CHAIRMAN (Mr. Zoe): Thank you, Mr. Minister. I would like to welcome the witnesses. The Chair has circulated the procedure that we will be following this morning. I believe that presentations will be made by Mr. Bangay, Dr. Kinloch, Professor Kuhnlein; and by the president of the Dene Nation, Mr. Erasmus, Ms Simon and Mr. Audlakiak, the mayor of Broughton Island.

Could I start with Mr. Bangay, to make your presentation at this time? I would like to remind the presenters not to talk fast because we have translation. So keep a good pace, but not too fast. Thank you. Mr. Bangay.

Presentation By Mr. Garth Bangay, Department Of Indian Affairs And Northern Development

MR. BANGAY: Thank you, Mr. Chairman. I would like to begin this morning's presentation by briefly describing for the Members of your committee some of the contaminants of concern in the Arctic; the contaminants that we have been studying over the last number of years.

Categories Of Contaminants

There are basically four categories of contaminants that we have been considering and these are man-made chemicals, acids, metals and radio-activity.

Man-Made Chemicals

The first category, the man-made chemicals, is perhaps the category of greatest concern to all of us in the scientific community and to you as well. When I speak of man-made chemicals, I am speaking of those substances or chemicals that have been deliberately made by man, as opposed to those which are by-products of other types of industrial processes. I am speaking specifically of chemicals such as PCBs, DDT, chlordane and toxaphene, the latter three being pesticides that have been widely used in North America and other areas of the world.

This family of chemicals is characterized by their persistence in the environment, their biological stability and the fact that for many of them they tend to concentrate in the fat of organisms. These particular characteristics result in these contaminants being magnified through the food chain. In other words, as one animal eats another the contaminants are passed on into the body of the other. This has a concentrating effect as we move from the lowest end of the food chain to the highest end of the food chain, thus increasing the risk of these chemicals to the whole system. These chemicals that we are concerned with have received wide use in industry and in agriculture and as such are widely dispersed around the globe.

PCBs

If I deal with PCBs first, I would like to just briefly describe that chemical. It is one that perhaps has most of the notoriety. PCBs were first used and developed in the early 1930s. They have been used in a variety of ways but basically in two different kinds of systems, what are basically called closed systems; systems in which PCBs were used in electrical equipment as a heat transfer liquid. These systems, like transformers and capacitors, are essentially closed. The PCB-containing liquids inside of them are away from the environment until such time as that container is breached and PCBs might escape.

PCBs, however, were used in a variety of other applications where their ability to get into the environment was much easier -- applications like lubricating oils, cutting oils, inks and even shoe polish. These uses were drastically curtailed during the 1970s and in 1977 Canada passed regulations that no longer allowed those uses in open systems. But we have experienced a long period of time in which they were used in ways that allowed them easy access to the environment. In 1980 Canada passed further regulations restricting the manufacture and importation of PCBs for any uses. The present objective is by 1993 in Canada to have phased out all uses of PCBs in even the closed systems that remain. So it is important to note that PCBs are still in use but in use within closed systems, like electrical equipment, the transformers and capacitors. They are in these uses here in the North and in the South. But 1993 is the objective date for their removal.

Pesticides

The pesticides that I referred to earlier, the DDT, the chlordane and toxaphene are no longer used in Canada and in the United States but they were used for long periods of time in both of our countries. The fact also remains that they enjoy widespread use in other parts of the world. DDT, for instance, is used extensively in India and Africa and Central America and South America. So, while we may not be using these persistent chemicals here, they are being used elsewhere and are being transported from those areas to other parts of the world.

Acids

If I turn to the second category, acids, I think most of us are quite familiar with this when we talk of acid rain and acid deposition. The levels that we are dealing with here are relatively low compared to the levels of acid deposition that we find in more southern latitudes, probably 10 to

20 times lower than what we find in southern latitudes. The acid deposition is derived from industrial emissions and from automobile exhaust. It is not seen by the scientists working on this as a problem here in the Arctic, although the sulphates which are part of the acid process are contributing to the arctic haze phenomena. But in terms of other impacts they seem to be extremely minimal at this time.

Metals

When we turn to metals, principally we have directed our attention to mercury, cadmium and lead. The major challenge, I think, with respect to metals in the environment is the separation of those which are man-induced, or a by-product of man's activity, and those which occur naturally in the system itself. We have seen high levels of cadmium in narwhal kidneys that have been measured. Those levels approach toxic levels. The scientists who have made these measurements suggest that this is largely of a natural origin in terms of this cadmium.

Radio-activity

If I turn finally to radio-activity, perhaps this best illustrates a success story when a pollutant of concern is identified on a global scale and action is taken. The levels of radio-activity here in the Northwest Territories reached their peak in the early 1960s. It was at this time that the countries involved in the atmospheric testing of nuclear weapons recognized the environmental impact and the Test Ban Treaty has resulted in a marked decline in the radio-active deposition across the Territories. This decline has been steady since the 1960s and perhaps the only change in that decline occurred at the time of the Chernobyl accident where we see a very small upward movement in that deposition. But that has returned and in fact the deposition that we now see could be compared to what we would expect to find as natural background levels. And so we have, I think, a success story. We have a global awareness of a problem, global action to deal with it and a measurable decline in a particular contaminant.

Approach Taken In Dealing With Contaminants

Now I would like to turn from my discussion of the contaminants themselves to talking about the approach that we have taken in terms of dealing with them. Prior to 1985 there were a number of studies of contaminants taking place in the Arctic. They were, by and large, studies being pursued by individual scientists, pretty much working on their own. But by 1985, based on the information that was being developed, we recognized there was an emerging problem here in the North and felt the need to bring that scientific community together to approach the problem as one, as opposed to in its parts.

In 1985 a committee was brought together that comprised a variety of disciplines, everything from atmospheric chemists or biologists through human health experts to deal with the issue. The committee allowed us to focus the resources of government to deal with the research requirements. The first action of that committee was to produce a baseline report which essentially established what it is we knew about the issue at that particular time. That report had been widely distributed and provided a focus for us in terms of the areas we needed to proceed on.

Ecosystem Approach

In our approach we have adopted what we call the ecosystem approach to the studying of contaminants here in the North. I think it is important to emphasize this approach because what we are attempting to do is to avoid breaking the problem into pieces which cannot be connected and therefore will not make sense in terms of the kinds of solutions we need to pursue. We have done this by first looking at the problem from the perspective of the sources of the pollutants themselves.

We have looked at sources from the point of view of being local sources and being distant sources. In terms of local sources perhaps the most infamous are the abandoned DEWline sites.

We recognize the presence of PCBs contained in equipment left at the DEWline sites in 1984. In 1985 there was a clean-up of the 21 DEWline sites across Canada's Arctic. Subsequent testing after the clean-up in 1987 at those sites provided us with information that residual contamination only remained at one site, at Sarcpa Lake.

Action is presently being taken to have a further clean-up of Sarcpa Lake this coming summer. I think it is important to emphasize in terms of the scientific work that was done that the conclusion is that the PCB-containing material at the DEWline sites did not contribute to the PCB issue that we are dealing with here in the North. These were isolated, small quantities of PCBs at a number of separate sites across the North. We have removed the material that was left at those sites and we do not anticipate any further problems.

We have also looked at distant sources in terms of their contribution to this overall budget. It is highly likely, given the kinds of deposition that we see in the Arctic, that distant sources are perhaps the most important in terms of this particular problem. The levels of PCBs and pesticides that we find in the North are relatively evenly distributed across the North. There is an absence of what you might call hot spots, or areas where you see anomalies in the concentrations of these contaminants. This would suggest that the sources are distant from the North.

Transport

We next turn to transport. How are these things moving from the sources to the Arctic itself? There are basically three ways that these materials can move; by the atmosphere, by river run-off and by the ocean currents. I think it is fair to say that we know the most about atmospheric deposition. The modelling and measuring that has been done for instance on sulphate deposition, this is the acid deposition in the Arctic, suggests that about 95 per cent of that sulphate deposition comes from Northern Asia and Europe. We have no where near as much confidence in terms of the organic pollutants or the man-made chemicals that I refer to. The behaviour of these particular chemicals in the atmosphere and in the water is less well understood and therefore we are not able at this time, to indicate the country of origin for these particular chemicals. What we are more likely able to say is that their origin is northern hemisphere.

The run-off, the rivers themselves, the contribution is likely to be important but we really lack good measurements in terms of concentrations of these things in the run-off water. But I think it is important to look for instance at a river the size of the Mackenzie and recognize that it only contributes about 16 per cent of the freshwater run-off to the Arctic Ocean, that in fact there are three rivers in the Soviet Union that account for 70 per cent of that freshwater run-off. We know nothing about the concentration of chemicals in those three rivers. So we have a lot to do in terms of our understanding of where a lot of these things are coming from in the run-off itself.

Likewise with ocean currents, we are dealing with the movements of large volumes of water into the Arctic Ocean and out of it. But again we lack good measurements with respect to concentration of contaminants in that water. So I think in conclusion one can say that we are looking at a vast transport system. We are, in the case of man-made chemicals, hampered in terms of our knowledge of where they are coming from. But we do know it is within the northern hemisphere.

Examination Of Systems

We approach the ecosystem by looking first at the freshwater system; looking at the plankton or the lowest life form in the water system, fish and the birds in that system, and measuring the contaminants that we find within that system. I am able to say that the levels that we are seeing of these man-made chemicals in the freshwater system are lower here than in southern Canada. For example, for a chemical like toxaphene, the levels in arctic char are about 10 times lower than in the Great Lakes' lake trout. Toxaphene, PCBs and chlordanes remain the contaminants of major concern in that freshwater system.

The other component of the system, the terrestrial system comprising the caribou, the fur bearers and birds is perhaps the least contaminated of any of the components of the system. The food chain or the opportunity for biomagnification in this system is less than that in the marine system. If we are looking at the caribou for instance, we have a food chain of lichen to caribou to man. Therefore the opportunity for that increase in the levels is not nearly as great as in the marine system. At this point I think we are able to conclude that we are not seeing problems in that terrestrial system and that there is no reason for concern there.

In terms of the marine ecosystem I think this is perhaps where most of our concern at this time lies in terms of contaminant levels. We have a higher opportunity for this biomagnification to occur. We find the highest levels of the man-made chemicals in this system; the polar bear with the highest, the narwhal, followed by beluga, and then by seal. Again all of the contaminants I spoke about are present in that marine system. We do have some information though, in the marine system, that is temporal in nature. In other words, we have data from a time earlier than now up until the present and it provides us I think, with some interesting insights into what is happening. However, it is difficult to speak with great authority about trends at this particular time.

For instance, in an animal like polar bear, we had data from 1969 and we have data from 1984. Comparing these two pieces of information we have seen a four times increase in the pesticide chlordane and a two times increase in PCBs in the fat of these animals. But I would want to caution you in suggesting that there is a trend here. What we have seen is a change in the levels. We are not certain to what to ascribe it to at this point.

With respect to seals we also have a data base that extends over a period of time. From 1972 to 1981 we have seen a decline in PCBs and DDT. We have also seen a similar decline in sea birds from the Lancaster Sound region. I think we are reassured when we look at the beluga population in the Eastern Arctic and compare it to the beluga population in the Gulf of St. Lawrence. The levels of PCBs in the population in the Arctic are 25 times lower than the population in the St. Lawrence River, suggesting the contamination of this St. Lawrence group by the industrial and human activity in the Great Lakes/St. Lawrence system.

However, with respect to the concentrations of chlordane, they are similar in both populations, which again reinforces this notion of atmospheric transport, the fact that we are dealing with broadly distributed contaminants over a large geographic area.

We have found dioxin in the Arctic. Monitoring of seals has shown a range of dioxin from less than two parts per trillion -- we are dealing with very, very small quantities -- to 30 parts per trillion. The guideline in fish is 20 parts per trillion.

Exposure To Contaminants Through Diet

The next sector, if you like, of that ecosystem model that we are approaching on is the discussion of the exposure of people in the Arctic to these contaminants, exposure through their diet. Here we are looking at the question of wildlife, plants and animals, versus the marketed foods that are available from the South; the balance that one needs to look at between these two, and the questions that need to be asked about that.

Finally, we are looking at the very important question of human health. Looking at, on the one side, the toxicity of these man-made chemicals, and on the other hand looking at the very important nutritional benefits that come with this wildlife, in terms of the diet of the people here in the North.

This then is the ecosystem model, if you like. This is the total picture. These are all of the parts of the picture that the scientists have been working on, collectively, over the last four years. I think I want to emphasize that it is important that people keep that total focus; that we do not take one piece of this and attempt to deal with it by itself. The system simply does not work that way and you simply cannot support any action to deal with this problem approaching it that way.

I also want to emphasize that we are facing a problem here in the North. Contaminants are elevated. They are part of a global problem, and it is a problem that needs to be dealt with. On that point, I would like to turn to Dr. Kinloch for his presentation.

CHAIRMAN (Mr. Zoe): Thank you, Mr. Bangay. Dr. Kinloch.

Presentation By Dr. David Kinloch, Health And Welfare Canada

DR. KINLOCH: Mr. Chairman, honourable Members, invited guests, dealing with the issue of contaminants in pieces has caused great difficulties in conducting intelligent research; but it has also had serious side effects in that it tends to produce an imbalance in the information which reaches the public -- and specifically the people of the North -- regarding contaminants. This imbalance has led to a great deal of unnecessary anxiety and concern, and for that reason Professor Kuhlein and I are going to be rather more direct in our statements than we might otherwise be in presenting the findings from work conducted in Broughton Island over the period 1985 to 1988.

I shall begin with our conclusions. We believe that the nutritional value of Inuit foods is extremely high. We believe that substitution of Inuit foods with marketed foods will result in a poorer diet, with the risk of damage to health. We believe that the benefits of Inuit foods, and of breast feeding, to Broughton Island residents are greater than the possible risk from the PCBs in food or in breast milk, and we would encourage the use of Inuit foods and breast feeding.

Pilot Study On PCB Content In Northern Diet

I would like now to explain how we came to those conclusions. In 1985 there was considerable concern about the possibility of contamination of food species from PCBs left at abandoned DEWline sites. As a result of visits we made to many communities in the NWT in 1985 we came to the conclusion that it was necessary to examine the possibility that northern residents were consuming more than an acceptable amount of PCB in their diet. We undertook a pilot study in September 1985 to examine whether this was a serious problem. The approach we took was to examine foods in terms of their PCB content, to look at the intake of food that was being consumed in a community, and we also took samples of blood and breast milk for analysis of PCB.

The study was conducted in the municipality of Broughton Island, with the advice and support of the mayor and council and that community. We approached Broughton Island to permit us to conduct the study there because our interpretation of harvest study data suggested that Broughton Island had very high potential Inuit food intake. The study in Broughton Island pertained only to a single period of the year, September 1987, and we did find PCBs in the foods; we did find PCBs in blood and breast milk. I would like to read you a paragraph from the report of the 1985 Broughton Island study. "Analysis of foods and human blood and milk for PCBs is fraught with difficulties in performance and interpretation. Further, there is an inadequate understanding of the toxicologies of PCBs. Under these circumstances the apparently excessive intake and blood levels for PCB should be interpreted cautiously. In particular, we believe it would be unwise to propose dietary modification in response to these findings. Instead, a serious effort should be made to quantify the risks and benefits of diets rich in fish and sea mammal lipids."

The 1987 and 1988 studies in Broughton Island were an attempt to accomplish that risk-benefit assessment. You will notice in the notes that we have distributed, the title from our study paper which will be presented in a much more detailed fashion than we can present here today, within the next few weeks. We titled our study "Inuit Foods and Diet, An Assessment of Benefits and Risks" and we chose the order, "benefits and risks", quite deliberately because in our study of Broughton Island and in our discussions in that community and review of the literature, and review of our findings, we concluded that Inuit foods provided more than simply nutrition to the community, they provided great social and cultural benefits and that it would be most unwise

simply to examine foods for toxic chemicals. Indeed, it is essential that any risk that might exist within the diet should be balanced against the benefits that are provided by it.

Risks Of Inuit Food Consumption

I shall now provide part of the risk side of that equation. Dr. Kuhnlein will present the benefit side and then re-state our conclusions.

We conducted seven dietary surveys over the period July 1987 to July 1988 and we are reporting here on 3002 dietary records for over 400 individuals. We found that Inuit foods contribute greatly to the nutrition of Broughton Island. Over the seven surveys, only 12.5 per cent of the population reported no consumption of Inuit foods. The average consumption ranged from 240 grams for females to 260 grams for males each day. That is between nine and nine and a half ounces of Inuit foods per person per day over that entire period. We found that seal, caribou and narwhal contributed 74 per cent of the total grams of intake, with more Inuit foods being consumed by older people than by younger people and more by males than by females.

The PCBs in diet are not uniformly distributed. More is found in sea mammals than elsewhere in the diet and more is found in beluga and narwhal and polar bear than is found in seals. From a knowledge of the PCB content of food items and the intake of these foods and the average weight for Inuit based on Nutrition Canada's studies, we were able to calculate the amount of PCB being consumed by individuals on a per kilo of body weight per day basis. And you will find a table which sets out the distribution of those intakes. The table sets out the intakes in micrograms per kilo of body weight per day and it ranges from zero for the individuals who consumed no Inuit foods at all, that is 12.5 per cent of the population, to a total of four micrograms per kilo per day with a predominance of the findings below one. In fact, only 12.3 per cent of the individuals had intakes greater than or equal to one microgram per kilo of body weight per day. One microgram is what is called the "tolerable intake", and "tolerable" is defined in a manner which is set out in a paper made available for this presentation today by Health and Welfare Canada and which you may wish to read later.

Health Risk Assessment Process

Briefly, I will explain how the health risk assessment process works. The first step is to determine the tolerable daily intake. This is determined through examination of the effects of the toxic chemical on animals. At some point in dosage there is a level where no adverse effect is encountered. That then becomes the base to which a safety factor is applied in order to determine the tolerable daily intake for humans. That safety factor may range from 10 or 20 or 50 to several thousand, depending on the nature of the adverse effects which are produced in the test animals and the reliability of information on which these studies are based. The second step is to determine the probable daily intake by assessing which foods, which sources provide this particular toxic chemical to humans, whether it be in the form of diet or in air, in water or whatever. In this case we are concerned with foods. The third step is to compare those two in the light of factors which would warrant a judgment to accept the balance as being acceptable or not.

The major consideration in this case and we will be speaking at some length on it, is the major contribution to nutrition that is provided by Inuit foods. Thus, the one microgram per kilo is a guideline, it is not a limit and there is no basis for believing that individuals who are consuming PCBs at the levels we have determined in Broughton Island are at any greater risk from that level of intake.

If you look at the next table in the handout, you will find the distribution of those PCB intakes by age group and by sex and you will find that for younger people, under the age of 15, nearly all of them have intakes below one microgram per kilogram. As older age groups are considered there is a dropping off which is more apparent for males than for females but that overall, the total proportion with intakes above that one microgram per kilo per day represents 12.3 per cent of the population. Incidentally, the proportion that we found in 1985 was over 18 per cent.

I have indicated that it is important to consider information arising from toxin levels or contaminant levels in foods and reports of the toxicity of chemicals in relation to the benefits that are conferred by these same foods which carry the contaminants. Professor Kuhnlein will now speak to the benefit side of that equation.

CHAIRMAN (Mr. Zoe): Thank you. Professor Kuhnlein.

Presentation By Professor Harriet Kuhnlein, McGill University

PROFESSOR KUHNLEIN: Mr. Chairman, honourable Members and invited guests, I also agree with Mr. Bangay and Dr. Kinloch that it is essential to look at the benefits as well as the risks of Inuit food consumption. It makes good sense to study nutrients at this point in time because we have very little published documentation on the nutrient values of foods in the North and we have very little published documentation on the balance of marketed foods and traditional wildlife foods in the diet of northern people. Because we know so much about the importance of these foods in the cultural life of communities we cannot ignore these factors. The work that we have undertaken in Broughton Island is one of the first detailed information bases that we will have on the nutrients and the patterns of consumption. We have also begun a similar study with the Dene people of Fort Good Hope and Colville Lake.

We were in Broughton Island for a considerable amount of time and it was costly to the community. We really did interview them rigorously. We were there every second month for a period of 14 months and we asked every individual to participate in our study if they were willing and to remember for us the kinds of foods and the amounts of foods that they consumed during the previous day. We also asked for information on the frequency of food consumption during the previous two-month period. We asked them about not only the traditional Inuit foods that they used but also about the marketed foods that they consumed. And with this information, because it considered the seasonal variations and all sex and age groups, we were able to come up with a population data base and to provide yearly averages.

At this point I really would like to take the opportunity to thank the people of Broughton Island and the interviewers who are residents of that community for participating to such a great extent for this important work.

AN HON. MEMBER: Hear, hear!

PROFESSOR KUHNLEIN: One of the other things that was a major effort during this work was to compile a list of the traditional Inuit foods that were consumed and also to sample them for testing. Working with the elders and with our local interviewers who were bilingual in English and Inuktitut, we were able to identify 80 traditional food species and parts of species that were required for collection and testing. The berries, the caribou, the char, narwhal, ringed seal and walrus were the foods that we found were consumed in greatest quantities by the people of Broughton Island. These were sampled and tested for a range of nutrients as well as a range of contaminants. The contaminants by the way, were tested in the lab of Dr. Muir who is sitting here to my right. Marketed foods were not sampled for testing because they had been part of a market basket testing study that has taken place in the South. You should know that PCBs are in everything that we eat. They are in all southern foods. They are present in small amounts in most southern foods. The greatest amount are present in the seafood that is consumed in the South. To reiterate what both Mr. Bangay and Dr. Kinloch have said, we did find that the majority of PCBs were found in the sea mammal foods and primarily in the blubbers of these foods and there were only small levels present in terrestrial foods including plant foods and including sea plant foods such as kelp.

Nutritional Value Of Inuit Foods

The diet records were reviewed for nutrients in both Inuit foods and the marketed foods and there is no question about the fact that we found that the Inuit foods were nutritionally superior to the

market foods as consumed by the people of Broughton Island. In the whole component of Inuit foods as compared to the whole component of marketed foods that are consumed, there is no question about the fact that the nutritional contribution of the Inuit foods is very great.

As part of our work, we have selected a list of five essential nutrients that are given in the table that is part of your information package on the last page. Because the sea mammal foods and caribou and char are the primary species consumed and because blubber, mattak and meat of these foods are the primary parts consumed, I presented this information for protein, protective fats, vitamin A, iron and zinc. These five nutrients are required by the body every day of a person's life. Protein is a source of all tissues in the body. It comprises muscle cells, nerve cells, brain cells, bone cells. It contributes to the processes of temperature regulation in the body and is the source of many hormones that are used in the body.

The protective fats are a compilation of data from the polyunsaturated fatty acids as well as these new fatty acids that have received a lot of nutritional research recently called the omega fatty acids. These groups of fats together are protective against heart disease. Dr. Kinloch will be happy to answer questions around the fact that we see very little heart disease among Inuit people and this is one reason why. The protective fats also contribute to the body's defence against infection and against cancer, particularly for cancer of the bowel which results from a high fat diet in conjunction with a lower fibre diet.

Vitamin A or retinol is also an essential nutrient that helps to protect the body against infection. Deficiency of vitamin A can cause poor vision and blindness. We have many children and many adults in the world suffering from vitamin A deficiency and blindness. Retinol also protects against cancer particularly cancers that are associated with high fat diets. Iron and zinc are two essential minerals that are also required. Iron carries oxygen to all the cells of the body and it helps to maintain energy levels by virtue of its oxygen-carrying capacity. Deficiency of iron causes anemia, failure to grow and failure to carry pregnancy to term. Zinc is another essential nutrient for growth and for carrying pregnancy to term but it is also essential for the healing of wounds and the maintenance of the body's protection against infection or the immune response.

Our evaluation of the dietary records provided from the community of Broughton Island shows that these Inuit foods, narwhal, ringed seal, caribou, char and walrus for some people are the only source of these nutrients in the diet. Large portions of these foods are consumed and they contribute on a daily basis to maintaining health. Protein is particularly contributed by the muscle meats and by mattak. Blubber, which also contains those PCBs we have heard about, contains the protective fats and retinol as does the flesh of char. Iron and zinc are found in the meat and mattak of sea mammals and fish and caribou. Over all then, the use of the Inuit foods by the people of Broughton Island provides a healthful and nutritionally superior diet.

The use of the marketed foods now available in the community and as purchased by the people do not provide many of the essential nutrients that are needed. There is a chance for real illness from nutritional deficiencies if the people do not eat their Inuit foods.

At this point, I would like to turn your attention to breast milk which is also considered as a traditional food among the people of the world. It has been under scrutiny for the content of PCBs. During my 1985 part of the study we took a small number of samples of breast milk from the women of Broughton Island and had them analysed for PCBs as well as the spectrum of nutrients that I just presented to you. The levels of PCBs in these samples were found to be within the range of levels contained in the milk of southern women and these analyses were done in the same laboratory that has conducted a nation-wide survey for PCBs in breast milk.

By the same token and very importantly, the breast milk of these women contained the protective fats in levels three to five times higher than were found in the breast milk of southern Canadian women and provides this essential component for Inuit infants. At this point in time, we have absolutely no evidence that breast milk is in any way harmful for Inuit babies. In fact we are convinced that there are more nutritional benefits and more good things in the foods of the Inuit diet to make breast milk than there are concerns with contaminants.

Cultural Value Of A Traditional Diet

Another benefit worth mentioning which perhaps does not even need mentioning to this audience, is the cultural values to the people for using their traditional dietary items. We did not assess this in a scientific way but it is quite evident that the hunting and use of these foods is one of the foundations of Inuit life and also needs to be taken into some consideration in this risk-benefit assessment.

So to restate our conclusions which you have before you in our documentation, first of all, there is no reason -- sorry, I retract that. There is reason for concern that Inuit food species and northern foods in general are contaminated as evidenced by the findings regarding PCBs. Secondly, the nutritional value of Inuit foods is high and their contribution to the cultural life of the community is great. Thirdly, substitution of Inuit foods with marketed foods now purchased and consumed will result in a poorer diet with a real risk of damage to health. Fourthly, the benefits of Inuit foods and of breast-feeding to Broughton Island residents are greater than the possible risks from the PCBs these foods contain. Finally, the use of Inuit foods and breast-feeding should be encouraged.

Ladies and gentlemen, I think our message is clear. Yes, our foods, all of the foods of the world are contaminated but at this time the foods of the North are not contaminated enough to stop using them. We do not encourage the people to stop eating Inuit seafood or land food and we do not encourage people to stop breast-feeding. It is also clear that we need more research to make every effort to understand how much of the contaminants are in the food but also about the nutritional value of these foods. It is also quite clear that we need a good solid basis of education and knowledge to help people understand the balance of good nutrition and the risk of contaminants in their diet. This ends my presentation. Thank you.

CHAIRMAN (Mr. Zoe): Thank you very much. Before I call on the next presenter, I think it is appropriate at this time that the committee recess for lunch and reconvene at 1:30 p.m. Thank you.

---SHORT RECESS

CHAIRMAN (Mr. Zoe): I would like to call the committee back to order. We have two more presenters. I would like to call upon the president of the Dene Nation, Mr. Bill Erasmus.

Presentation By Mr. Bill Erasmus, Dene Nation And Metis Association

MR. ERASMUS: Thank you, Mr. Chairman, honourable Members and guests. I would like to make some comments to the briefing that we have had. I would like to speak on behalf of the Dene and the Metis.

The news that we have heard here today is unsettling for people who live off the land. The animals are not only our livelihood, but are really a part of us. When the animals are poisoned, so are we. Of course, what we hear really is not news. The Dene and the Metis have been telling Ministers of Fisheries, of the Environment and of Health, about our concerns for some years. More and more we hear stories of animals with strange growths in their bodies; water fowl that make people sick when eaten; and of course the fish in the Mackenzie River.

One question keeps coming up, are they safe to eat and how much can be eaten safely? I have had a frustrating time getting answers to questions. First we had to explain that a fish study had to be done. Then when the first study came out, the experts told us that it did not really mean anything, that one fish had a lot of toxaphene in its liver -- "that fish was from a polluted lake" was what they said. We told them that if a person ate a teaspoon of this liver he would be eating more than the safe amount. "Those standards do not really mean anything", they said. So the question is, why did we set them?

When a second study came out, which found more loss with high toxaphene in the liver, some experts started to believe us. We are still being told that the standards do not mean anything. The experts tell us that they do not really understand toxaphene, or PCB, or chlordane, or DDT, or other man-made chemicals. But they assure us that we do not need to be concerned about our health. "The benefits are so much greater than the risks", is what we are told.

We have no reason other than to be suspicious. If there is really not an understanding of these chemicals, how then can we be told that the risks are low? There are questions that we have to ask. Why has it taken government so long to set up a study? When studies are finished, why are the results always qualified? It seems like the experts do not really want to look at our problems. It seems like they are indicating to us that everything is fine, but at the same time we have, as I indicated earlier, a great deal of concern.

At this point, listening to the evidence presented to us, the Dene and the Metis really cannot determine whether or not the risks and benefits analysis is right or wrong. We really have not had the opportunity to study the data, but we are definitely going to get another opinion. We are going to have to get a second look at what is being told to us, mainly because we have a right to decide for ourselves whether or not the food we eat is safe or not.

There is something being told to us that we have to agree with. Our world is being poisoned by more chemicals than we can really count. I think the best way to deal with these chemicals in our food is to stop them at the initial source. Most of the countries in the world are adding to this pollution and we end up receiving them. Therefore, this pollution has to be stopped.

Pressure On The Part Of The GNWT

I want to urge the Government of the Northwest Territories to do everything it can to put pressure on our own Canadian government and other countries to stop what they are doing to us and to themselves. I want to urge the federal government to do the same thing. I know they have done a lot in recent years concerning acid rain and now we have to concentrate on the North.

I do not think we can afford to keep poisoning this world and I believe that it really is not just the Dene and the Metis, and of course the Inuit in the East, who have to worry about the foods we are eating, the foods that we rely on, especially because we are not the ones who are doing the

polluting. The evidence indicates clearly that it is coming from other sources. So I also want to call on governments everywhere to stop for a second to look at what is happening.

There are a couple of other points I would like to make. For whatever reasons native people were discouraged from attending the long-range transport of contaminants workshop in Ottawa recently. I think this is wrong. If anything, we need stronger participation by our people to identify our concerns and to learn what all of this research by scientists means in everyday terms. And I am asking that the Dene Nation meet with these researchers to develop a plan for meaningful data collection which would have relevance to our own people. As you know, there has been little consultation with the people who are mostly affected and we are only now really beginning to understand this problem.

In addition, I think what we drastically need is a policy developed to avoid alarming the public. We know what this recent study in Broughton Island is doing. There are many people who are concerned and it makes me question whether or not we are tackling this as well as we ought to. I would like to, again, get to the point where we ought to question whether or not there is enough evidence provided to determine whether or not there are risks of eating country foods and whether or not they do, in fact, outweigh the benefits. We are being told that but I do not think we are being provided with enough sufficient evidence.

There is much more research required. We require a monitoring program to determine whether or not the fish, for example, with the Dene/Metis, whether or not the fish we eat are increasing or decreasing their body burdens of contaminants. We know that scientists really do not have a good picture of the long-term risks and that there is a great deal of research necessary to determine that.

North Can Take The Lead

I think what the Assembly is attempting to do now is a positive thing. I think we are finally beginning to grasp what this global problem is all about. We may have thought at one point because we are so far north, because we are in a colder environment, that we are not accessible to these kinds of problems but that obviously is not the case. I think because we are one of the areas in the world that is still close to being a pristine area, we may be able to lead. I think the Legislative Assembly can take a lead in Canada and, of course, protecting the North and illustrating what can happen elsewhere. It is going to take a massive effort because it is an international one. We may want to start at home developing an internal strategy but we are also going to have to work on an international front. It is going to take a very strong effort, an aggressive effort by the North.

I would like to indicate that we as aboriginal people would like to be fully involved and fully informed in the process. These are some of the comments that I wanted to make. Thank you, Mr. Chairman.

CHAIRMAN (Mr. Zoe): Mahsi cho. Next presenter, president of ICC. Mary Simon.

Presentation By Ms Simon On Behalf Of Mr. Stevie Audlakiak, Mayor Of Broughton Island

MS SIMON: Thank you, Mr. Chairman. Honourable Members and invited guests. First I would like, on behalf of the mayor of Broughton Island, Stevie Audlakiak, like to say a few words. He apologizes for having to leave for home so he is not here to make a presentation but he did ask me to make a few statements on his behalf.

He wanted the Members here to know that the Inuit of Broughton Island are extremely concerned right now about what is going on. They do not know really who to believe at this time because the same people that said there was cause for serious concern two and a half months ago and that were making statements in the newspapers, are the same people that are now saying there is no cause for serious concern but that there is contamination. So he wanted me to ask, who do

we believe or what should we believe? The people in Broughton Island are really very concerned about it.

The mayor also indicated that it is very important that the Inuit of Broughton Island be given accurate information in a timely manner. He feels that the trip that is going to be made in May for an information exchange is much too late, that it has to be done now so that the apprehension that is being felt by the community can be diminished as soon as possible. He wanted to make that clear.

The other point he wanted me to raise was about the development that takes place in the Arctic. When the old DEWline was built, the Inuit were never told there were any PCBs, but years later they find out that our food chain is being contaminated. He felt that there has to be a lot of emphasis on proper assessments before any development takes place and that accurate information must be made available to the Inuit. Right now there are seven stations being built on Baffin Island for the North Warning System and people are now very concerned that these new sites will have contaminants also. They want to have accurate information on these new installations that are going to be built. This is what he wanted me to say.

Presentation By Mary Simon, Inuit Circumpolar Conference

Now I will make the presentation on behalf of the Inuit Circumpolar Conference. The Inuit Circumpolar Conference is an international organization that represents Inuit from Alaska, Greenland and Canada. For the past few years, we have been actively involved in working toward a comprehensive Arctic policy on a wide range of issues. In particular, this includes many aspects related to the environment, including transboundary pollution, which we now face. ICC is deeply concerned about the PCBs and other chemicals that are currently polluting the Arctic. We are relieved to hear from scientists and government representatives that Inuit can continue with their diet of country food. However, we continue to be very concerned about the long-term effects of transboundary pollution. We are convinced that a comprehensive strategy must be developed if we are to effectively deal with the ongoing problem.

Such a strategy should include the following elements, among others: First, serious efforts must be made to determine the sources of transboundary pollution and to then prevent their entry into the global environment. Secondly, there must be more in-depth scientific research in all areas of the Arctic to determine the levels of existing pollutants and to monitor them in the future. Third, we must actively encourage Arctic and other governments to co-operatively answer to an international convention that will effectively deal with all major aspects of transboundary pollution. Fourth, there must be an effective communication strategy especially to inform people at the local and regional level on an ongoing basis and such a strategy should be sensitively carried out so as to keep northern peoples fully aware of the potential risks and issues related to the problem without creating an atmosphere of panic or fear. Fifth, in carrying out any comprehensive strategy it is essential that northern peoples' organizations have an opportunity to fully participate on a continuing basis.

International Strategy Of Inuit Circumpolar Conference

In terms of the ICC, we are focussing on this issue at the international level. Last week the ICC executive council adopted a resolution that sets out an international strategy for our organization. Secondly, next week I will be sending a letter to Geneva to emphasize the need for environmental rights to be recognized for aboriginal peoples. In particular we will be emphasizing the duty of states to take measures to prevent all forms of transboundary pollution.

The ICC recognizes the crucial health aspects related to this problem. However, as an international organization we feel that these health concerns should be actively dealt with by appropriate health authorities at the local, regional and national level. In closing, I would like to emphasize our concern and commitment on this issue and we would be pleased to co-ordinate our efforts with others. Thank you.

CHAIRMAN (Mr. Zoe): Thank you. The Chair will open the floor for Members to question the panel. Are there any questions from the floor? Mr. Lewis.

MR. LEWIS: Thank you, Mr. Chairman. There was a statement, I believe, made at the beginning of this morning's session in which an explanation was given as to why Broughton Island had been chosen as the place in which this study had been done. As I understand it, it was chosen because this was a place where there was a high intake of country food. I suppose my question is, of all the places in the Eastern Arctic which could have been chosen, was there also another reason why this particular place was chosen? Was it because the residents there had indicated some concern? Had, for example, some of the work of Dr. Schaeffer, who had been interested in this dietary matter some years ago, -- was this one of the places that he had done some work in, and had he identified it as a place where perhaps some research could be done? Or was it because it was also one of the places where a DEWline had existed? Could I get some better explanation as to why one particular place was chosen over several others?

Also an additional question. When the conclusions were given by Dr. Kinloch this morning, he said that there is reason for concern that Inuit food species, and northern foods generally, are contaminated, as evidenced by the findings regarding PCBs. He did start off his summary by saying that he wanted to be positive and talk about the value of the food and so on, the importance of the nutrition to the people, but he did point out that this contamination did exist. I wonder how you could come to that conclusion on the basis of findings in one particular community. Can you generalize? I am not trained as a scientist -- but can you generalize throughout the Territories that this is, in fact, the case? Or is it just simply in Broughton Island, where they have examined in great detail over several years and have found that contamination does exist in the food intake of the people?

Those are my two questions. Were there other alternatives they could have looked at? What was the specific reason for choosing Broughton Island? Secondly, can you generalize to all the other places on the coast from that one study in Broughton Island?

CHAIRMAN (Mr. Zoe): Thank you. Dr. Kinloch.

Reasons For Choosing Broughton Island For Study

DR. KINLOCH: Thank you, Mr. Chairman. Broughton Island was approached regarding their participation in this study on the grounds of data obtained from the Baffin harvest data for 1983. This data indicated that, among all of the Baffin Island communities, Broughton Island had the highest per capita intake of Inuit foods. Broughton Island had also shown an interest in the subject of PCBs and had invited a team to visit the community to discuss the DEWline sites and their intended clean-up. The community was receptive to a request that a study be conducted there.

In terms of generalizing from Broughton Island results, I believe it is possible to generalize in the sense that we know that food species are contaminated across the Arctic, and Derek Muir can speak specifically to that. We are also aware, from harvest data collected elsewhere in the Territories, as to the range of food species which are used in communities, and we can therefore, in a very general sense, speculate on the amounts of PCBs which would be consumed there. We do not purport to use this data to indicate specifically the nature of PCB intake. It would be only used as an indicator.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Muir, do you have anything to add?

MR. MUIR: I can perhaps just say that our surveys of marine mammals -- ringed seal, polar bear and beluga -- show very similar levels of, for example, PCB, right across the Arctic, so I think that would support Dr. Kinloch's point that he made.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Angottitauruq.

MR. ANGOTTITAUURUQ: Thank you, Mr. Chairman. First of all, in looking at the mean PCB intake per day, we have a scale here in front of us. The native people are concerned about the native foods. Since we are not trained scientists, we have in the panel experts in the field. It made me wonder why also -- I just heard the answer why Broughton Island was chosen. I will be seeking an answer, and if I cannot get it today, probably will make some scientists seek the answer. The question I will be asking is with regard to PCB, and I will also go on to something else.

Link Of PCB Levels And Suicides

I am wondering if the PCBs in the body, does it have any effect on the mind of humans, if it is a large quantity? I know it is a health hazard. The reason why I want to ask the question, does it affect the mind of a human, is because going to another study -- the study on PCB intake shows that the males have the highest level present in their bodies and looking at this suicide scale, males in the Northwest Territories are one of the highest and it made me wonder why. Just the other day when we were talking about suicide in the Northwest Territories, Dr. Dyck said that in the community called Broughton Island there were a series of suicides several years ago. So these two are not exactly -- they are not related. One is about PCB and the other is about suicide and both indicated that males are the highest. The reason why I am interested is because one showed that males have the highest intake and the other showed that males are the highest in suicide. It made me wonder. There were some whales one time that were in America that beached and all died, so my question is do the contaminants affect human lives, especially their minds? That is the first question, Mr. Chairman.

CHAIRMAN (Mr. Zoe): Mahsi cho. Dr. Kinloch, is there any link?

DR. KINLOCH: Mr. Chairman, the subject of suicide in the Territories is very distressing to all of us. During my four years here as regional medical officer, I examined the statistics for suicide and was struck by the patterns of suicide ranging from zero in communities and regions for long periods of time and suddenly a spate of suicides all occurring within a relatively short period of time. I would like to say that I knew why that happened and many others would like to say so, but the answer is we do not know. In terms of the relationship of PCBs or any other contaminants, I am not aware of any evidence which would suggest such a link.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Whitford.

MR. WHITFORD: Thank you, Mr. Chairman. I had an opportunity yesterday of hearing a presentation and I raised the concern that I had then and I will do it again because the news reports are quite frightening. On Tuesday last week both CBC and CTV in their second news item, carried it in a fairly glamourized fashion. They were pushing the fact that the Arctic was polluted. The Toronto Star had a large article and the Edmonton Journal another article. Last night on the news again, it keeps coming. And not so much, I suppose, the southern people's concerns but the northern people pick these things up on CBC and they, too, become quite alarmed with it. Then you can pick up another article somewhere else and say, well, there is no real danger. There are contaminants and there are pollutants in the Arctic but that is okay, they are not high enough to harm you.

Time When Contaminants May Be Harmful

But at some point they do become harmful. I do not know when. The news dies down after a while and then another study takes place and then the same thing happens, a lot of hype. It reminds me of the story of the little boy who cried "Wolf". When the wolf did come to his door no one believed him. I wonder if the same thing will happen in the Arctic. Oh, there is another study and, oh, it is contaminated; yes, we know that but they say there is nothing to worry about. But at some point in time maybe there will be and it will be too late.

That aside, I have a question that would be -- I do not know whether or not in order to do something now, to assist people who are living on country foods there were examinations done of animals and they found certain levels of foreign contaminants in their bodies. Would this be

seasonal? Are there times of the year perhaps, when the contaminant levels would be lower because of food sources and such? Would those be the times of the year that people would harvest these animals? It might be a little different than what they normally would pattern but would there be some way that people for the interim could protect themselves? Or is it once it is ingested it does not really matter when?

CHAIRMAN (Mr. Zoe): Thank you. Dr. Kinloch.

Critical Linkage Lacking In News Reports

DR. KINLOCH: Mr. Chairman, if I may make a suggestion to the honourable Members, in terms of subsequent news stories and comments they hear about contaminants, I would suggest that they disregard statements that mention only the contaminant level and make no comment about intake of the source and no comment about the potential benefits that might arise from intake of that particular food. Much of the difficulty that has been caused by stories about contamination is that the pieces are not linked, that reports are made that such and such a food source has been found to be contaminated at such and such a level and from there an immediate assumption is made that something needs to be done. Well, that simply is not true. It is necessary, it is critical that the linkage be made between the level of contaminant, the amount of intake of that contaminant from all sources and finally, and perhaps most importantly, a measure of the risk against the benefit. If you do that you will spare yourself a lot of anxiety. In terms of your second question, sir, I might ask Derek Muir if he could respond.

CHAIRMAN (Mr. Zoe): Mr. Muir.

MR. MUIR: The Member raised a good question as to whether levels vary over the year in the animals we are sampling. I guess the best answer I can give is that we do not know generally because we do not have access to samples, say for example, of seals all year for our analysis, but from what I am aware, at least with PCBs, there is not much variation over the year in the actual concentration we might measure, for example, in the fat of the animal. But it is true to say that a fatty animal would have higher levels than a lean animal. The actual amount in the animal then can vary depending how much fat it has in it, but not by hundreds of fold, only by two or threefold. So really I do not see advice in terms of eating in a certain season playing much of a role here.

CHAIRMAN (Mr. Zoe): Thank you. Supplementary, Mr. Whitford.

MR. WHITFORD: Thank you, Mr. Chairman. The other concern I had, although you may have explained it a bit, when we talked about levels. Yesterday I did see in your material here, one of the graphs that you used showed the levels of concentration of PCBs throughout animals caught across the Territories. True, they were very slight in their amounts, but that does not really make much difference, I guess, to a person who is worried about this, whether it is just a little bit or a little bit more. The question I had, the data you provided showed that there were two places where the levels were a little bit higher. That was in and around Coral Harbour, Repulse Bay, the northern part of Hudson Bay. There were two areas that were higher. They had gone over the one point something. Then further up, I think it was around maybe Sachs Harbour, again it was a little higher up there as well. Is there any explanation as to why those three areas have even slightly higher amounts than the general amount across the Territories? Is there something there that may be contributing to the increase of contaminants in the fat of animals that were examined?

CHAIRMAN (Mr. Zoe): Thank you. Mr. Muir.

MR. MUIR: It is true that in the lists that I presented to the Members -- the Member has seen the data that I showed on levels in polar bear liver of PCBs and also PCBs in seal blubber from about the same location, all the locations he mentioned. It is true that levels are slightly higher by less than about two times, in those two areas in Hudson Bay than they are for the other areas generally, for seals and also for polar bears.

Explanation Of Higher Levels Unknown

Some scientists believe this is because Hudson Bay being further south has received more input, via the atmosphere, of PCBs coming from the South. But we do not really know the explanation. This is one explanation. In terms of the case of the polar bears, there are two sites on the north side of Victoria Island, Hadley Bay and Melville Island where they were slightly elevated. Actually it was hard to see exactly on the graph but those were the two sites. That was for polar bears only. No seals have been collected in that area and analysed by my lab. But we do not have, I think, a good explanation as to why they were slightly elevated.

Again, we are talking about not even twofold higher than the average. It may be the different habits of the bears in one area versus another or even the age and size of the bears could affect the levels. Really you have to take into account that within a group of bears -- and we were presenting just one number averaging all the bears that were analysed -- there is quite a variation, up to about 50 per cent from animal to animal, so that can account almost for the differences that we are seeing from site to site. I am quite confident in saying that there is no hot spot there. It is within the normal variation.

CHAIRMAN (Mr. Zoe): Thank you. Your last supplementary, Mr. Whitford.

MR. WHITFORD: Thank you, Mr. Chairman. It will be my last question. Just touching on what you said earlier. I had a note about the belugas that were examined in the St. Lawrence basin. The contaminant level in the belugas was 25 times higher than animals found in the Arctic. But what you just said, that it depended on the habits or it depended on the age of the animal, were these animals that were studied about the same age? Because I know that we do not hunt beluga whales in the Gulf of St. Lawrence. They are protected, so conceivably they can be older, whereas in the Arctic the animals are hunted and could be younger so they do not have the same amount of accumulated contaminants in their bodies. Do you have any data on their comparable ages?

CHAIRMAN (Mr. Zoe): Thank you. Mr. Muir.

MR. MUIR: Yes, we do, and that is a good point. In fact however, the ages of all the animals we compared were about the same. It is true to say the St. Lawrence animals were slightly older on average but we had enough -- at least that study that was done, I did not do it myself -- the published information shows that there was nevertheless quite a range of ages, even in the St. Lawrence, for the animals analysed so the best explanation for the differences between the Arctic beluga and the St. Lawrence beluga is because there is more or less direct pollution of the St. Lawrence River which seems to have contaminated the fish there, resulting in very high levels of contamination in the beluga. Age does not account for the 25-fold difference. It might account for a twofold difference but not 25-fold.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Butters.

HON. TOM BUTTERS: Mr. Chairman, I guess I will just make a comment and maybe some of our witnesses may wish to say something about my comment. It would appear that questions about safe levels of contaminants in our northern food chain really have been unanswered. What has been determined is that you have raised an awful lot more questions than were out there before. It almost appears that we have set up a job creation program for researchers. One thing we can be sure of is that we have really increased the fear level, the apprehension level, in the people of the North. That is one thing that has been done.

I note the comments by our native witnesses. Mr. Erasmus: "We need a policy developed to avoid alarming the public." I think that is a very wise statement. Mary Simon speaking for Mayor Audlakiak: "We need accurate information in a timely manner...so the apprehension felt can be diminished." -- really reflecting Mr. Erasmus' words. Ms Simon herself: "...without creating an atmosphere of panic or fear". I think that is exactly what has happened in the North. We have created an atmosphere of panic and fear. We can blame the journalists. We say that they have

gone off half cocked again, but the journalist only repeats what he hears. He may select, and he may select the most eye-catching or ear-catching statements and phrases, but that is what he does.

Really, I ask you, have you not, in effect, shouted "fire" in a crowded theatre? Why is research not looking at these force-fed chickens and force-fed pigs and force-fed cows in southern Canada? Why are you up looking at the North? Is it because nobody is going to argue with your findings? I am wondering, have you helped create an atmosphere of fear and apprehension which is really very, very unnecessary for northern peoples?

CHAIRMAN (Mr. Zoe): Thank you. Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, I am as concerned as Mr. Butters about the anxiety which has been raised in the North by stories about contaminants in the food chain. If I knew of a way of examining an important issue in a manner which would produce information, in a manner guaranteed not to cause alarm, then I would be happy to pursue it. Unfortunately, the collection of data, the slow painstaking understanding of a complicated issue, frequently does raise many more questions than answers, at least initially. From the outset, we have taken pains to point out that we are dealing with a global issue, that contamination is not limited to the North, it is global.

We are examining the issue here because the diet of northern people places them at a particularly unusual exposure. They are eating a relatively small number of foods, which happen to be those which have the highest contamination levels. It seems to me that we might more properly be criticized for not having examined this issue some time ago when we first learned of contamination in the food species.

The situation cannot be improved, I do not think, without the risk of causing some alarm, and I am anxious that this alarm be kept to a minimum and that it quickly be dealt with. There have been suggestions that a mechanism is required to communicate results and to respond to concerns and to allay fears quickly and I would support such an approach. I think that the suggestion of creating continuous employment for researchers has an element of truth but in fact unless we support that research we are not going to be in a position to provide the sort of reassurances that I think Mr. Butters would like to have for his constituents.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Ernerk.

MR. ERNERK: Thank you, Mr. Chairman. First of all I would like to thank the witnesses who appeared before the committee this afternoon. I very much feel with what Mary Simon is saying from the ICC and I very much feel with what Mr. Erasmus is saying, because I live with the same kind of situation that Mr. Erasmus lives with, in Nunavut. I guess if I could just make one or two remarks before I ask for some clarifications.

Contaminants In The Arctic Come From Other Countries

It is too bad and it is most disturbing for me as an Inuk from Nunavut to see that we Inuit are living with somebody else's problems and the same people who contaminated Nunavut do not seem to take enough initiative to clean up their act. That is what frustrates me. When we first found out about this issue really in public was on December 15, 1988 when Matthew Fischer of the Globe and Mail visited Chesterfield Inlet and the headline appeared "Soviet And European Pollution Threatens Health In Arctic". That is when the issue became widely known. I would just like to refer to one or two statements here, two or three statements, paragraphs by Mr. Fischer. He said, "The chemicals including PCBs and DDT have entered the fragile Arctic ecosystem and are being found in the fish and animals that form the basis of the Inuit diet." He went on to report the following, "The potential magnitude of the problem is such that 'The Inuit might have to go on a diet of chicken and beef', said Dennis McGregor of Environment Canada's water quality branch in Regina. What I would like to say to Mr. McGregor is that if you think we Inuit are going to convert to chicken and beef overnight, think again.

Mr. Chairman, I would like some clarification from Dr. Kinloch in this report. He was quoted as saying that while PCBs are being consumed by Inuit, the health of the NWT's 13,000 Dene and Metis is being endangered by another group of contaminants which he did not identify. I wonder after, if Dr. Kinloch would clarify what he means on this particular one.

I am not going to go into this big speech about the Inuit being managers of their own lands. Everybody knows that by now. But I have some questions and comments to make. In this report of December 15, which appeared in the Globe and Mail, it also states that at a recent meeting in Geneva, Mr. McGregor said a Soviet scientist confirmed to him that most of the toxic substances found in the Canadian Arctic are still in use in the Soviet Union. We have not been able to get much information about their studies or the use of these contaminants in European countries. I wonder if there has been anything further on this particular situation.

I guess what I do want to say too on this, Mr. Chairman, I know that the Soviet Union and the Americans last fall spent a lot of money to save two grey whales off the coast of Point Barrow and the fact that both countries are probably very guilty about the pollution of the Arctic, they surely could spend millions and millions more dollars to clean up the environment.

Mr. Chairman, I would like to refer to another quotation here that I noticed during the Sixth Session of the Legislative Assembly held in Yellowknife on October 24th, 1985, and this quote belongs to Michael Angottitauruq, one of our own colleagues. He said during his reply to the Commissioner's Opening Address, "All those old DEWline sites and the animals or sea mammals have been contaminated by PCBs." So in a sense this Legislative Assembly has been trying to get some more information about the contaminants but there has not been enough action by the governments responsible.

Has any thought been given to this idea that we Inuit should seek compensation from DEWlines or governments responsible for the contamination of our Nunavut? I think, Mr. Chairman, we need much stronger laws to protect our environment, our animals.

(Translation) As well, I would like to state further, Mr. Chairman, as the Inuit when we heard about this news in December 1988, it seems that the researchers were just trying to make us scared or to intimidate us for our land and our animals. Now that they have further explained, since there is so much research going on in our community and the scientists are studying our animals, the Inuit and the Inuit communities, they are being taught to study some parts of the land. We would like to know what the studies have come up with up to this date. We would like to see our own native scientists taught to study their own land.

CHAIRMAN (Mr. Zoe): In the Member's comments, I think there were about four questions there.

DR. KINLOCH: Mr. Chairman, I shall respond to the first question regarding Matthew Fischer's article. I remember very clearly my telephone conversation with Mr. Fischer and I remember very clearly I did not use the word "endangered". I spoke to Mr. Fischer of studies of other contaminants which were under way in the Territories at that time and I did not specify what they were. The contaminants I had in mind were, first, toxaphene which is being studied in the lower Mackenzie as a contaminant of burbot and I was referring to contamination of caribou by cesium 137 which was the object of a study by the health protection branch of Health and Welfare Canada and in fact is under way right now at Rae-Edzo.

CHAIRMAN (Mr. Zoe): Mr. Bangay, do you have anything to add?

Information From Other Parts Of The World

MR. BANGAY: Thank you, Mr. Chairman. I would like to respond to the other three questions that were raised by the Member. The first with respect to Mr. McGregor's efforts to get information from the Soviet Union on the chemicals of use in that particular country. We had a meeting last week in Ottawa of the scientists who have been involved with this program over the last four years. It was a meeting of about 45 scientists, some from the international community. During

that discussion, it became very evident to those of us who were present that there was a great deal of information lacking about the manufacture and use of many of these chemicals in other parts of the world. This information is not easily available through the existing international organizations, and often is protected through copyright law or through statistics that are kept by the individual countries. I think that this will have to be a priority in terms of our ability to get that information. Mr. McGregor's requests of the Soviet Union have not met with any success in the nine months since he asked for that original information. We will pursue that in terms of getting a better handle on that information base in the future.

With respect to the next question dealing with the DEWline sites, I would like to just reconfirm that the status of the clean-up at those abandoned DEWline sites -- the 21 sites have been visited in 1985 -- and the materials that contained PCBs were removed from those sites. There was no evidence of a larger environmental problem or a contamination problem at the sites. There were several instances where machinery or equipment had been breached or damaged and PCBs had leaked out onto the ground. In those cases, the soil was removed and soil samples were taken and were analysed.

When we had the results from that clean-up, there were several sites where it was indicated there were still levels of PCBs that needed to be confirmed further. In the summer of 1987 those sites were revisited and they were resampled extensively. Those soil samples were analysed and the results indicated that there was only one site remaining, and that is the site at Sackville Lake, and there the PCB residues were on the walls and floors inside two of the buildings. Those buildings were closed immediately to public access and there are actions planned for this year to complete that clean-up.

There are other sites -- military, coast guard, communications sites -- in the Arctic that are not DEWline sites. Some of these sites have been examined. Padloping, for instance, in the Eastern Arctic has been examined for the presence of PCBs. It has been confirmed that there are no PCBs there. There are sites like Resolution Island, south of Baffin, where PCBs have been identified as being present and are still present. Plans are under way, as far as I know for this year, to conduct a clean-up program at that particular site. We have no evidence of a larger environmental problem due to contamination with PCBs at the abandoned DEWline sites. I am happy to report at this time there is only one that remains with any significant residue whatsoever.

Report To Be Published In Scientific Journal

With respect to the last question in terms of the availability of information on what the scientists are doing, the meeting last week was held to allow all of the scientists an opportunity to evaluate the work that had been done over that four year period. A lot of that information had already been published in the peer-reviewed scientific journals, but a good deal of it was also unreviewed and unpublished. That meeting gave us an opportunity to add that kind of critical review. The information is being put together in a report that will be submitted to a peer-reviewed scientific journal, so that we have confidence in the accuracy of the results in the information that is presented there.

The scientists had not wanted to release or discuss findings before that kind of critical review occurred. I think all of us very much regret the situation that developed with the Globe and Mail article and the subsequent things that occurred after that. We are attempting to control the situation in terms of having a good solid review of the information that is there. Thank you.

CHAIRMAN (Mr. Zoe): Thank you, Mr. Bangay. Supplementary, Mr. Ernerk. No statement, just questions.

MR. ERNERK: Thank you, Mr. Chairman. My last remark was more or less a remark made with regard to training of Inuit as scientists, but I thank Mr. Bangay just the same. Mr. Chairman, my other question is this. We are going to be getting the North Warning System in Rankin Inlet this summer, at least beginning this summer. What about the possibility of problems with low flying

airplanes, jets? Should we be on the lookout for something that we do not know at this point in time, perhaps, Mr. Chairman?

CHAIRMAN (Mr. Zoe): Thank you. Mr. Bangay.

MR. BANGAY: Just one observation, Mr. Chairman. The new sites for the North Warning System all have been screened from an environmental impact point of view, and those reports are available for discussion. I would be happy to provide to the Member any of the information on the particular site at Rankin Inlet that he is interested in.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Allooloo.

Comparison Of PCBs In Northerner And Southern Foods

HON. TITUS ALLOOLOO: Qujannamiik, scientists and the federal government officials for coming up here to inform us of their findings. This area is very very critical to our people. It is important for our people to understand what is happening up here in terms of contaminants getting into the food chain. I would urge the scientists and the federal government, and us as the Government of the Northwest Territories, to pursue an understanding of what we are dealing with regarding contaminants, especially those affecting the northern foods. Basically, Mr. Chairman, are the PCBs in the NWT, that are eaten by the people in the North, higher than that of the people from the South -- actually, higher than that of the food that the southern people eat? And to what degree is it higher?

CHAIRMAN (Mr. Zoe): Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, we have only limited data on the consumption of PCBs by southern Canadian residents but there are some data now being developed for five cities across the country on a market basket approach. That is, measuring the PCBs in an average selection of foods that would be consumed by southern Canadians.

An earlier study in Vancouver, on a similar approach, indicated there was a very low level of PCBs in the average intake, which reflects average consumption. There are people such as sports fishermen in the Great Lakes area who may consume considerable amounts of PCB from contaminated fish and in other areas of the country as well. But in general we would expect the intake to be less than that of northern residents who are eating primarily native or Inuit foods.

CHAIRMAN (Mr. Zoe): Thank you. Supplementary, Mr. Allooloo.

HON. TITUS ALLOOLOO: Thank you, Mr. Chairman. How does the PCB, once it is in the human, how does it get dissolved in the body? How does one get rid of PCBs? How long does the process take?

CHAIRMAN (Mr. Zoe): Thank you. Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, PCBs are absorbed into the body as food is digested. Not all of the PCBs in the food is taken into the body but that PCB which is absorbed finds its way into the fat of the body. Some of the PCB can be broken down by the body and excreted. But some of it cannot, and much of that PCB remains in the body for long periods of time, measured in years. So that the only real way of getting rid of that kind of PCB is in breast milk which explains the differences in PCB levels in male and females of all mammals.

CHAIRMAN (Mr. Zoe): Thank you. Your final supplementary, Mr. Allooloo.

HON. TITUS ALLOOLOO: This is my final supplementary. I will ask a few questions in one shot.

---Laughter

My first question is that since males do not have breasts to feed babies and there is no way of getting rid of PCBs through that process, is it possible if a person is really fat and he loses a lot of weight and gets rid of all the fat he has, does he get rid of PCBs? My next question would be connected to the question that was asked by Mr. Whitford. Contaminants in the St. Lawrence River are affecting belugas in terms of reproduction of the species. We know that the contamination is 25 times higher than that of the beluga in the Baffin area or in the total northern species. My question would be, to what degree is the northern species of beluga affected, taking into account the different climates that these species live under? Mr. Whitford also mentioned that there might be different levels in different seasons. Do we understand or do the scientists understand these different levels; that is, which seasons seem to affect the animals more in terms of contaminants? We understand from the scientists who have studied caribou that radio-activity in caribou varies in different seasons because the caribou eat differently in each season.

CHAIRMAN (Mr. Zoe): Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, I can speculate on the question regarding the loss of weight as a means of getting rid of PCB. It is to my understanding that weight loss would simply permit the redistribution of the PCBs into remaining fat. At some point, however, some other mechanisms would take over. Probably the best information on this sort of thing might come from studies conducted on levels in polar bears and other animals where you may observe that. So I will ask Dr. Muir if he has any comments.

CHAIRMAN (Mr. Zoe): Dr. Muir.

Contaminants Affecting Belugas

MR. MUIR: Thank you, Mr. Chairman. Maybe I can continue on answering the questions because I can come to that one, it was the third question. The question about contaminants affecting belugas I will respond to first because I think it is an important question, which my colleagues at Fisheries and Oceans in Winnipeg are really quite interested in. There is certainly evidence that PCBs in the Baltic, for example, in ringed seals, appear to have caused reproductive failure in those ringed seals but I might point out that in the case of seals, the levels are about 100 times higher in the Baltic than they are in the Canadian Arctic ringed seal. It is also true that there is certainly concern, if not direct evidence, but there certainly is suspicion that PCBs are responsible for the apparent failure to reproduce in belugas in the St. Lawrence.

The levels are so much higher that at the moment all we can say is that we do not believe that there is any effect of PCBs on the reproductive rate of Arctic belugas because of the 25-fold margin difference between the two groups. But it certainly is something that bears watching and there are ongoing studies of the size of the beluga population, as many of you may be aware, by biologists working with Fisheries and Oceans. So this particular question will be addressed or is being addressed.

As to the variation in concentrations in the animals and different seasons, or for example, when you are losing weight would you concentrate the PCBs? As far as I am aware, it is true or at least it makes some sense to say that you will. If you start losing fat you will not lose PCB at the same rate you would lose the fat, but I do not know, really, of much research on this issue and certainly when it comes to looking at wildlife and at the species year round, there really is not much study of the relationship between the fat or the leanness of the animal or its change in its fat content and the PCB load in the animal. But clearly male animals do not have many mechanisms of eliminating PCBs. If they burn off their fat, presumably most of the PCB that was in that fat will be recycled in the body as Dr. Kinloch has mentioned. And that is about the best answer I can give at the moment.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Patterson.

HON. DENNIS PATTERSON: Thank you, Mr. Chairman. I would like to thank the witnesses for their hard work and their clear presentations and I would also like to mention that I am very

pleased to see the involvement and concern and hear the recommendations of the ICC and the Dene Nation, who I know have been working with other aboriginal organizations. I think it is important that they be involved in this very important debate.

Mr. Chairman, I would like to get to my questions or my one question. I think facts are very important with such a sensitive subject and other Members, including Mr. Butters and Dr. Kinloch and Mr. Erasmus, referred to the need to be careful with information given to the public so as not to cause undue alarm. With that in mind I would like to ask the scientists to comment on findings in two recent press reports which I felt were presented in quite a dramatic way.

PCBs In Mothers' Milk

The first, February 7th, 1989, a Canadian Press story. Inuit officials in Northern Quebec are worried about recent findings that nursing mothers have dangerously high levels of toxic PCBs in their milk. The story concerns a study by a Dr. Dewailly, who led a team from the Laval University teaching hospital in Quebec City. Their study found that samples of mothers' milk contained levels of PCBs higher than those recorded anywhere else in the world where such studies have been conducted, according to the CP story. I believe the witnesses are familiar with that story.

The second is a story from the Edmonton Journal of Sunday, February 5th, 1989, headed, "Arctic wildlife face PCB-driven extinction", citing an interview with a Joseph Cummins, an associate professor of genetics at the University of Western Ontario, who, himself, cited studies in the Arctic revealing a fourfold increase in PCBs in the fat of polar bears between 1969 and 1984. If that trend continues, Mr. Cummins estimated that by the year 2005 the level of PCBs in polar bear fat will reach 50 ppm, a point at which other studies indicate the male of the species will lose the ability to reproduce. He talks in the story about the possible extinction of polar bears, walruses, seals, whales and the ocean fisheries and uses what I consider the very pejorative word: "apocalyptic".

Mr. Chairman, my question is to the scientific witnesses. Would anyone care to comment on these two findings? Are you familiar with the data, methodology used? How do these findings and perhaps the reporting of these findings compare with your findings on Inuit mothers' breast milk and PCBs in marine mammals? And I know that sometimes it is difficult for professionals to comment on other professionals' work but these reports received such wide publicity and I think caused such alarm that I would appreciate it if you would care to make any comments that you would consider appropriate. Thank you, Mr. Chairman.

CHAIRMAN (Mr. Zoe): Thank you. Dr. Kinloch.

Different Results From Different Samples

DR. KINLOCH: Mr. Chairman, the results that are reported from the 25 samples analysed in Quebec are dramatically different, dramatically higher than the results which we obtained from an admittedly small number of samples in Broughton Island. Knowing the complexity and the pitfalls in PCB analysis, my first question on seeing those numbers was, where were the analyses conducted and how were they done? I understand that the analyses were conducted at the Institute of Toxicology in Quebec, which is an outstanding laboratory. However, it is not one that I had previously associated with a lot of PCB work and so I would have some concern about the methodology until assured by someone like Dr. Muir, whose laboratory has done an awful lot of PCB analyses, that the methodology is comparable to the one from which we got our results in Broughton Island. I would ask Dr. Muir to comment on that.

CHAIRMAN (Mr. Zoe): Dr. Muir.

MR. MUIR: Thank you, Mr. Chairman. Last week when my colleagues and I first saw the results in detail from this group, the chemists amongst us, and I am a chemist by training, were somewhat alarmed by the kind of actual raw data of their results because it looked to us as if they were

possibly adding the toxaphene, which was mentioned several times here today and which is also present in marine mammals' blubber and possibly in mothers' milk as well, and confusing that chemical with the PCBs.

And maybe I should relate quickly a problem that I have had in my own lab doing the same thing. When we first looked at narwhal blubber about six or seven years ago, we also had this problem and reported to Dr. Kinloch -- and Dr. Kinloch wanted to use those results for his work in 1985 -- reported levels of PCBs which turned out to be about twice as high as they actually were. Then my lab reanalysed samples with a more accurate method for PCBs that prevented the interference from toxaphene. So last week I mentioned this to the people from the Laval lab, the Quebec lab, and they were, I think, a bit surprised about that kind of interference. They had not anticipated there would be that kind of problem, of one chemical interfering with another in the analytical results. So they are going back, I think, to reexamine their results based on our comments last week.

Article Misrepresented Scientist's Results

Maybe I could respond to the second question regarding polar bears. The article in question was -- maybe I should put it this way -- the scientist in question was at our meeting last week and he was concerned about this article and felt that it misrepresented his results. I should point out that there was a basic inaccuracy in the results because I have the publication in front of me that Dr. Cummins used, and he misquoted the results in the first place. The average increase that was found between 1969 and 1984 in polar bears from three sites was 1.9 times higher in 1984 than in 1969, not four times. So his calculation was off right from the beginning.

All I can do, perhaps, is repeat Dr. Nordstrom's comment to the effect that he was not -- this two-fold increase -- he is not sure of the meaning of that increase. It may reflect simply differences in the age and sex of the bears that were sampled in 1969 against those in 1984. He did not have full details of the samples taken earlier. So that is one aspect. The second aspect is that he could not understand how there could be any scientifically valid method that this professor could use to come up with the statement that the bears would be extinct on the basis of his results, which were simply on the levels of the PCBs in the bear fat in one year compared to the next. He knew of no obvious method by which this could be arrived at.

I guess the final comment, which is mentioned in Dr. Nordstrom's paper, is that the populations of bears, at least in the Hudson Bay area where some of these increases were noted, have actually doubled between the mid-60s and 1980. So the association of PCBs with reproductive failure of the bears is not apparent in bears, at least from that area. I think that the scientific community regards Dr. Cummin's conclusions as completely erroneous.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Patterson.

HON. DENNIS PATTERSON: Thank you, Mr. Chairman. I find those comments very interesting and important. I cannot help but note that the author of the Edmonton Journal article in question is here with us today and perhaps he will report your comments in the Edmonton Journal, because I think it is important that, while this is a serious problem, that we work with the best, most accurate information and methodology available.

If I may, one more question, Mr. Chairman. Mary Simon spoke of the need for an international convention of Arctic and other states to deal with transboundary pollution. I know that the Inuit Circumpolar Conference has been working for several years in developing an Arctic common policy. I would like to ask Ms Simon whether the ICC is considering the Arctic contaminants pollution issue in the approval of the Arctic common policy at their forthcoming conference in Greenland this year. Thank you.

CHAIRMAN (Mr. Zoe): Ms Simon.

Transboundary Pollution On Agenda For Greenland Conference

MS SIMON: Thank you, Mr. Chairman. Yes, the item of environmental concerns will be on the agenda for the ICC general assembly, and specifically, the issue of transboundary pollution is on the agenda for that conference. In addition, the Inuit of the Soviet Union and other government officials will be attending our general assembly. So we are hoping that we can have discussions with them as well.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Lewis.

MR. LEWIS: Thank you, Mr. Chairman. From time to time I agree with Mr. Butters on some of the things he says, and on this particular occasion I cannot help thinking that although I am really convinced that many of our northern problems can be dealt with by good science, I think we have to take a scientific approach to the way we develop.

I still cannot help feeling that many scientists that live in the South and do their work in the North are somehow sheltered from the realities that we have to live with in this part of the world. I cannot help feeling that what we have here is a classic case of damage control, where we have had people doing scientific work and for one reason or another, bad communication has taken place, in a part of the world where there are political realities they are somewhat sheltered from. The rest of us are not. People who live here are not sheltered and the people that we represent like to feel that the kinds of issues that bother them from day to day are being handled in a fashion that gives them some confidence about their security.

Exercise In Damage Control

So that was my first concern, whether this, in fact, is simply an exercise in damage control. Because scientists, who may be very, very good scientists, have just simply not handled this part of their mandate very well. Scientists, in my opinion, in the past have not proven to be great communicators. They communicate very well within their own group, but with the general public, I do not think the record is very good, although I would exclude, perhaps, David Suzuki and Issac Asimov from that group; I think they are very good communicators.

Earlier on I was glad to hear that there is no evidence of hot spots throughout the Territories. I had hoped that was the answer. Because if you know it is in an isolated place, then perhaps you can do something about it. It is something that you can identify and you can isolate it and perhaps solve it. But since now we find it is a generalized problem, from the data you have collected, it seems to me that what the scientists have told us is that it is no longer really a scientific problem. They have already, through their data collection, indicated the level of the problem. It is now a political problem. They have created a political problem through the release of this data.

If I hear what Mary Simon said earlier on, that is a conclusion she has come to as well. It is not just simply a scientific issue now. It is a matter for the international community to do something about. She is, through her organization, prepared to make that next step toward making it a problem that several groups of people throughout the world are going to come together to solve. So what, really, can science do now? You have done your data collection; you have generalized and said, "Yes, this is the level of the problem that we have." It is a huge problem. What can science really do to help solve this problem? Because it is no good to say that we will collect more data. To me that is not good enough. You have indicated the size of the problem. I have come to the conclusion it is now a political problem. What can good science do to help deal with this problem?

I am not talking about nutrition, Mr. Chairman, I am not talking about nutrition. For the last 25 years Marilyn McDowell, whom many of us know, has worked on northern nutrition. She studied it to death. She now works, I believe, at St. Vincent University in Nova Scotia and comes up into the Territories regularly. Dr. Schaefer for the last 25 years has looked at northern nutrition. I do not think we need to know more about what is good for people to eat. They have been doing it

for thousands of years and they look very good to me. So we do not need to know more about what is good for people to eat. They already know that. What do we do about this issue of contamination? What can science do to help us with our problem?

CHAIRMAN (Mr. Zoe): Thank you. Mr. Bangay.

A Great Deal Left For Science To Do

MR. BANGAY: In response to your question and your comments, I think there is a great deal left for science to do. This does not suggest that there is not something left for politicians to do. There is something for both of us to do in terms of dealing with this issue.

The scientists who met in Ottawa last week, probably as scientists often want to do, raised more questions than they provided answers. But I think today that we have been able to provide you with a good deal of information about this issue of contaminants in the Arctic. Certainly I think in the international community, Canadians know more about what is happening in the Arctic with respect to contaminants than does any other nation. I think that is rather important. I think that at that meeting last week, we left a lot of international scientists impressed with what is happening in Canada and with a desire to go back to their own countries and to begin to mobilize some of the interests that we have here. So I think a broad basis of knowledge is required around the circumpolar world. We are only part of that total system.

When I talked to you this morning about the ecosystem approach, I stressed the fact that it is important that all of those components of the system be understood and be related. I talked about sources and I talked about how little we know about some of those sources. If we are going to have a solution to the problems we are dealing with in the North, we are going to need to know an awful lot more about those sources if we are going to control it where the control would be best applied.

I talked about transport. I talked about how those things are getting into the Arctic. We know only a bit about that movement and how it is getting here. We need to know an awful lot more about that if we are going to be effective in dealing with the problem. We talked about the levels in the freshwater system, the terrestrial system, the marine system. We have information on each of those systems. But you have heard from Dr. Muir that the trend information is based on very little data. We do not know much about the trends. There is an awful lot more to be learned about there, as well.

We have looked at one community, Broughton Island. Certainly there needs to be further work and further assessment in terms of the human health concerns here in the North. So there is a great deal of work to be done by scientists. There is also a great deal of work that needs to be done by governments, generally, to deal with the issue and I think we are at that juncture now where we can begin to share some of the work that needs to be carried on.

CHAIRMAN (Mr. Zoe): Thank you. Supplementary, Mr. Lewis.

Clean-Up Of DEWline Sites

MR. LEWIS: Thank you, Mr. Chairman. When your group examined the 21 DEWline sites in, I have not written down the exact year, 1985 perhaps, and decided that this clean-up would take place, it is my understanding that what was on the ground, what you could see was cleaned up and it is my understanding that this was done in a very systematic fashion by comparing what should have been on the site when it was put in place -- and I do not know how you went about that, knowing precisely what it was that was on site when the various DEWline sites were established -- and then examining what was left and then arranging to transfer the PCBs to the US.

My concern is this: How accurate is the information you got about what actually was supposed to have been on the site? Because I know, for example, that during the 60s even, there were all kinds of stuff moved off sites for one reason or another. Some of it went to communities to help

with community development projects. There were furnaces moved off, building materials, caterpillar tractors, all kinds of trucks and vehicles, and so on, that should have gone to the bottom of the sea. Apparently this was the traditional methods of disposing of this stuff. When a major was asked to clean a site, he just simply put it out on the ice and it went through when the spring came and then he made his report about what he had done to dispose of everything.

So my question is this: When you examined that site at Broughton Island, did you do more than simply look at what should have been on land? Did you in fact look out beyond that particular site to examine what may have been put offshore? Because I am sure on Broughton Island there would be many informants who could have told you exactly the manner in which some of that stuff had been disposed of prior to this clean up in 1985-86. So that is a concern I have. Have you in fact looked offshore to see what junk may have been put there?

Although I am convinced, Mr. Chairman, I may say, by the evidence I hear that it is not likely not a question of having some hot spots here and there -- it is a generalized problem, from the data we have been shown -- but I still have some concern as to whether in fact you do have stuff offshore which contains these PCBs. Because I know when I look at little fishes swimming all over the place that they like to go in and out of bits of equipment if it is there. They seem to enjoy that kind of environment. So if there is a pile of junk piled offshore somewhere in Broughton, it could be that many of the animals that people are eating, maybe that is their swimming pool. That is where they enjoy themselves and that is maybe where they pick up all this bad stuff that contaminates people. That is why I wanted to ask if you have looked offshore, Mr. Chairman.

CHAIRMAN (Mr. Angottitauruq): Go ahead.

MR. BANGAY: One of the advantages we had in cleaning up the abandoned DEWline sites was that each of these sites were built to very specific technical specifications. Those specifications are a matter of record and all of the information down to the individual bolts is a matter of record. If there is one thing that DND does, it keeps lots of records, and so we knew precisely what kind of equipment and how much of it was in the sites when they were operational. Based on that knowledge we then proceeded with the clean-up and we proceeded at each site to look for that equipment because we knew what was supposed to be there. When we had finished looking at all of the 21 sites, we were able to account for just slightly over 70 per cent of all of the PCB-containing equipment. That leaves us with something less than 30 per cent unaccounted for.

Equipment In Use In Communities

At the same time as the clean-up crews were going through, we had people in the communities asking people questions about whether they knew anything about equipment from the sites, where it had been taken and so on. We recovered a number of other pieces of equipment this way and in fact, we found some of the equipment in use in communities. For instance, in Pelly Bay the light for the airport is driven by a transformer from one of the DEWline sites. It contains PCBs. It has been labelled, and the community has been advised, if and when they decommission that, what they need to do with it. There is a proportion of that that is either in use in communities, or is somewhere else in the system. It is a relatively small proportion.

There is evidence at some of the sites where there were garbage dumps created during the time of the operation of the site, that some of the equipment could have been buried there. We have sampled around those sites, we sampled the run-off leaving those waste sites, and have not detected PCBs. That does not mean that there may not be pieces of equipment in there, but they are in a permafrost regime. The PCBs containing oils at those temperatures are extremely stable, even if the material was breached, and are not seen to be presenting a hazard in those situations.

There is a calculation that Dr. Barrie and Dr. Muir did, which I think might help to put into perspective the size of the issue that we are dealing with here in terms of that residual PCB material that is left unaccounted for, and that which is coming into the North from other sources. If I may, Mr. Chairman, I would like to ask Dr. Muir to relay that calculation, because I think it puts things in perspective.

CHAIRMAN (Mr. Angottitauruq): Dr. Muir.

Calculation Of PCBs In Snowfall

MR. MUIR: Thank you, Mr. Chairman. Dr. Barrie has made this calculation, based on work that has been done in terms of measuring PCBs in snow, which was done a couple of years ago in a broad area throughout Arctic Canada by Environment Canada. When we took those results, which showed very low concentrations in the snow -- I will give you the numbers just for purposes of record here -- of 0.04 to 0.6 micrograms per metre, we then tried to estimate how much that would be in PCBs over an area the size of Baffin Island. Taking into account that this snow arrives annually, we did determine that over a 10 year period there would be as much as six tons of PCBs arriving just from the atmosphere. That is just for an area the size of the entire Canadian NWT, essentially. It would be two tons for Baffin Island, or, multiplying by three, would be about six tons in 10 years. That we estimate in the period 1970 to 1980.

If we are trying to put the PCB issue in perspective, we should not just be concerned about PCBs in DEWline sites because PCBs were arriving, especially during the 1970s, at microgram amounts in snow every year. If you took the entire area into account, that is more than was actually used, probably, on the DEWline sites in their entirety. It is much much more than ever was leaked out or otherwise lost from the transformers, taking into account that 70 per cent were removed, and the oil in those transformers was not necessarily pure PCB -- it was actually a mineral oil with PCB in it. So the amounts of PCB that have been lost in the environment from DEWline sites were almost certainly much much less than what was arriving in the atmosphere.

CHAIRMAN (Mr. Angottitauruq): Thank you. Mr. Gargan.

MR. GARGAN: Thank you, Mr. Chairman. If I could ask some questions before we take a break. Before my time there were a lot of Americans developing airports along the Mackenzie River. I could only speak for my area where a lot of equipment was buried in the ground. Also a lot of electrical transformers and lines that were left standing up, most of them are down now. When you refer to cleaning up PCBs, would those old sites pose a hazard?

I would like to refer to uranium and the by-products of uranium. The life span of uranium is anywhere from nine million years to about three minutes, depending on the component. There are something like 15 components to uranium that produce radiation. The radiation could last from nine million years to three minutes.

Radiation In Caribou

When you refer to contaminants in caribou meat, the contaminants do not go away when you kill the caribou. It is still there, and it is passed on to humans. What remains of the caribou, the liver, the bones, that still contains radiation. It is passed on from there to the porcupines that eat the bones, or other animals. What component of radiation is in the caribou now in the NWT? What is the life span of that radiation in these animals?

In 1960 was the peak of atmospheric testing of the bombs that has caused high radiation levels in the North. What is the result of that now that it is on the ground? It is still there, and it is being consumed by animals, and certainly the animals and the humans do have contact with these plants and so on. What are the levels now, as compared to 1960 on stuff like lichen, for example, that the caribou eat?

Have there ever been professional scientists -- as professional scientists, I would like to ask you whether or not there has ever been a base study done with regard to uranium mining before uranium mining was started, so that you could know what the trends are in the data, because I believe the first gentleman did say we do not know what the trends are. But when you start the uranium mines, if you start doing tests then, it is too late. You cannot be sure whether the health hazards or the problems are attributable to it because they could have been there before, or after.

So I would like to ask whether or not there was ever before a uranium mine was started, a baseline study done on the atmosphere, the animals, the water, the fish, the humans. That is my question, Mr. Chairman.

CHAIRMAN (Mr. Angottitauruq): Which of the panelists would like to answer that question? Dr. Bangay.

MR. BANGAY: Thank you. I will attempt to address your first question. If I understand it correctly, you are asking about some military installations that were constructed along the Mackenzie Valley? If that is in fact the question, I am sorry I will not be able to respond. I have no information with me today on those sites or on the material that was left there. But I certainly could look into that for you and provide some answers.

CHAIRMAN (Mr. Angottitauruq): Thank you, Dr. Bangay. I guess we will break for coffee and we will proceed when we come back.

---SHORT RECESS

The committee will now come back to order and I would like the witnesses back to their seats. Madam Cournoyea.

HON. NELLIE COURNOYEA: Thank you, Mr. Chairman. Mr. Chairman, I am sure we have all come to the conclusion that clearly people are having problems understanding the contaminants issue. Although it seems that everyone agrees that the research and the findings are not totally conclusive, I am very pleased to hear and to have it acknowledged that Arctic people can now be encouraged to continue to consume country food and continue to breast feed their children. At least I believe that is a very important conclusion.

Mr. Chairman, I believe that there were some statements made about damage control. Mr. Chairman, the reason that the people are gathered in this Legislative Assembly because the Government of the Northwest Territories had come to that conclusion that there was already a great deal of anxiety created, particularly from the southern media and reports going to the people of the Northwest Territories. I hope in some part that today's debate and fact finding will give some feeling that perhaps we have come together, not only as a scientific community but as politicians and leaders of aboriginal organizations in the last six to seven weeks.

Comprehensive Policy On Arctic Environment

There are a few questions that I would like to pose. One question I would like to pose to Mary Simon of the Inuit Circumpolar Conference, and really just for some more information because I feel that it is important, because certainly some of the activities that the Circumpolar Conference has embarked on are really futuristic recognition that these problems have to be solved. There was a mention on the comprehensive policy on the Arctic environment and I am wondering if she could elaborate on in what form that is and some of the key elements and, as well, her statement on native involvement in environmental rights and if those thoughts have been developed?

A question to Mr. Bill Erasmus of the Dene Nation, and I appreciate his attendance today. The reference that we have heard quite a lot about in the last few years and that is the desire of the Dene people to have fish studies done in particular around the Fort Good Hope area. I know they had a great deal of difficulty in gaining the recognition to be taken seriously that there was a concern. I would like him to perhaps elaborate on where he feels that study is, what stage that study is and what has to be done too perhaps, if it is not concluded, or if the findings have not been conclusive, and there has to be more information gathered, I would like him to say a little bit about that particular issue.

The other question that I would pose probably would be to Dr. Kinloch, I believe, and it is on a finding. It comes out of these investigations or scientific gathering of data in the last couple of years, concerning omega fats, that there is a link to the well-being of Inuit particularly, related to

evidence that there are very few heart attacks among Inuit. It appears that there is establishment that eating country foods that contain omega fats are a direct contribution to this healthy lifestyle, concerning heart attacks. So those are the three questions to the three different individuals I would like pursued. Thank you.

CHAIRMAN (Mr. Zoe): Ms Simon.

MS SIMON: Thank you, Mr. Chairman. I am sorry I was being interviewed outside when the honourable Member was asking a question of me but I think I got most of it. If I miss anything you can ask me again.

The initiatives that are being undertaken by the ICC include some of the following: We have had a conference call with the other ICC council members from Alaska and Greenland and we are trying to find out how much work and research has been done in the northern parts or in Greenland and in Alaska in terms of this issue that is before us today. So that is one initiative that we have undertaken now; we are also calling on the Governments of Canada, Greenland and Denmark and the USA to make resources available to the ICC for some research work and co-ordination of communications that we can undertake to provide to our constituencies; we are also co-ordinating with other Inuit organizations in development of a communications strategy, both within the Inuit regions and internationally to draw this issue to public attention. So these are some of the initiatives that we are taking.

The other point that I raised already with Mr. Patterson is that this issue is a very important agenda item for the ICC general assembly which is going to be held in July this summer and it will be debated at the plenary session and also we will be having workshops on environmental concerns, so it is a big part of the conference. I am not sure if I missed anything.

CHAIRMAN (Mr. Zoe): Ms Cournoyea.

HON. NELLIE COURNOYEA: Mr. Chairman, the first part of the question is that of being actively involved in a comprehensive policy in the Arctic environment and I know I was just wondering if there was a paper or preliminary paper that is available in leading to those discussions this summer?

CHAIRMAN (Mr. Zoe): Ms Simon.

MS SIMON: Yes, in the Arctic policy development work that we are doing we have done papers on environmental protection, scientific research and other areas, so we could provide that information to you.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Erasmus.

MR. ERASMUS: Thank you, Mr. Chairman. The fish study in the Fort Good Hope area is primarily concerned with to what extent we have toxaphene in the fish in that area, primarily with the livers. I understand that the data is still preliminary. It is still being collected and really has not been compiled to date but we believe that it is a beginning to really get a handle on what kind of a problem is out there. We are anxious to find out the results. I really do not have enough material in front of me to comment much more than that. Thank you.

CHAIRMAN (Mr. Zoe): Thank you. Dr. Kinloch.

DR. KINLOCH: Thank you, Mr. Chairman. There is a class of fats known as omega fats which are believed to confer protection against heart disease and other diseases. These protective fats are present in large quantity in Inuit foods, particularly the blubber of narwhal, walrus and ringed seal but they are also very prevalent in the skin and flesh of arctic char.

Professor Kuhnlein has mentioned that comparison of the levels of these protective fats in the breast milk of Inuit women is five times higher than that of breast milk obtained from women in

Vancouver which suggests that these fats are being transferred to the infant where they also have a very valuable contribution to make to the development of nerve tissue among other things. We received reports from the physicians who have worked in the North over the years that they rarely, if ever, have seen a heart attack in an Inuit person. While there are certainly other factors that might be at work, we believe that the diet plays a major role in protection against cardiovascular disease. I should also point out that diabetes is relatively rare among Inuit and there again diet may play a role.

The advantages of traditional foods as consumed in the NWT is probably a whole lot greater than we will ever be able to examine in a scientific manner but the studies that we have done and even the little that we know suggests that these benefits have to be taken very seriously into any calculation of the risks of contaminants.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Pudluk.

Information Needed On Types Of Contaminants

MR. PUDLUK: (Translation) Thank you, Mr. Chairman. I have some comments to make regarding these issues. I could make it long but I will try to make it short. I think it has become obvious that we should be concerned about the atmosphere. We are not just concerned with PCB and this is not just one kind of pollutant that we should be concerned with in the North. I tabled a document in February 1988. This paper was done by an organization who are the environmental protection group. I think that during the 1960s there was a disease-causing contaminant in the air and the government used to tell us that if you took in this much of it you could get sick. But today the scale that they went by is much higher now. They are now saying that if you eat this much then you can be contaminated by this food. I think if this level is going to continue to increase then how am I going to know when I have a disease or a sickness? Is the only way I am going to find out if I have an illness is when my head drops?

Since we have been hearing a lot about contaminants through the media, we are not just talking about PCBs but other contaminants as well. It seems that we should be very concerned about it but we have never been told how much and to what levels contaminants exist in the North. As we have heard before the males are more susceptible to retaining contaminants than females. It seems obvious that it is not just a case for PCBs. There are other contaminants that are getting into our bodies. The males in the North spend more time outdoors than females. Perhaps breathing in contaminated air is probably also affecting them more than females. I am sorry that I was not born a woman.

There was also a paper or a report done during the 1960s, whether the caribou meat we ate at the time was safe to eat. This question has not been answered to date. Also, in 1958, the spread of tuberculosis was highest during that period, maybe that was caused by smoking. But the people started smoking around the 1900s, that was when tobacco was introduced into the North. Even though the people were smoking for a long time, it was noticed for the first time that they were getting TB in 1958, and this was during the time when more industrial activity was taking place, especially in the area of nuclear energy. At that time, I thought it had been agreed by the Canadian government and the American government that they wanted to conduct scientific experiments, and they had an agreement to do that in the North.

I know there are people who are expert in these matters, and they are not residing in the North, the people who call themselves experts, and they are not too concerned about the contaminants in this area, because they are not going to be affected by it. I know that there is some contamination in southern Canada but they are more protected than those of us who are living in the North. Also, our food chain, it has been said, especially about the caribou and fish, that they are getting more and more contaminated. When are they going to start safeguarding them against contaminants, and what kind of medication should people be taking to protect themselves against contaminants from what they eat? Thank you, Mr. Chairman.

CHAIRMAN (Mr. Zoe): Thank you. Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, I have made a note of three questions to which I will respond. If the Member wishes to pursue them further, I will be happy to follow through. Firstly, in relation to caribou and the contaminant levels which have been associated with caribou over time. In the 1960s, as a result of atmospheric atomic bomb tests, the radio-active cesium levels in caribou reached very high levels and became a subject of concern to the Department of Health and Welfare, which at the time measured and found levels in the order of 3000 units of radiation per kilo of caribou meat. They also carried out tests of the amount of radiation in people and found that although they were elevated, they were still considerably below the amount that would be considered acceptable for someone working in an uranium mine, or in a radiation industry.

Last year and the year before, as a result of the explosion at Chernobyl, further tests were carried out of radiation levels in caribou to see what affect that accident had had upon the radiation in the animals. Surveys were conducted across the North, including Northern Quebec, and the highest level found was in the order of 1000 units of radiation -- that occurred in the Ungava -- in most areas and extending west the levels dropped much below that. Overall, the level in caribou was between five and 10 times less than it had been in the 1960s.

Because there was still some concern about the amount of radiation which was reaching people, Health and Welfare has mounted two studies, one in the Keewatin and one here in Rae-Edzo, to measure the amount of radiation in people. The Keewatin work has been completed, 400 people have been examined; and work is in progress in Rae this afternoon and will continue over the weekend. Dr. Bliss Tracy was here earlier in the day -- I do not know whether he is still in the audience, if he is he may be able to comment on his findings -- but I can tell you that that work is under way and the results are available instantaneously. There is a printout of the result which is given to the individual at the time.

The second question referred to tuberculosis and the possible relationship to contaminants. It is certainly true that the TB rates among Inuit were extraordinarily high not that many years ago. It is also true that the control program for TB among Inuit has produced the most dramatic decline in disease rates ever observed anywhere on earth, to the point now where TB is rare among the Inuit. The last time I did the calculation, the rate was lowest amongst the Inuit of all the population groups in the NWT. That does not mean that we can relax about TB, as you understand, because of the outbreak at the end of 1988 in the Keewatin, which is producing significant increases in the rates. Tuberculosis is going to be around for a long time and it will take a continuing effort to keep it under control, but it is spread by a germ. It is a disease of man and of a very small number of animals. It is spread from person to person, and to my knowledge there is no relationship to exposure to contaminants.

There was a question regarding medication which might be taken to protect against contamination. There is none that I am aware of. The answer to contamination of our food chain is to reduce and ultimately end the addition of contaminants to the environment and to the food chain.

CHAIRMAN (Mr. Zoe): Thank you. Mr. Whitford.

MR. WHITFORD: Thank you, Mr. Chairman. I just wanted to pass on a couple of comments to the panel. In any kind of news item the newspeople like to pick out the juicy parts and spread it around, because it does sell papers. One of the things that has been on my mind certainly has been reinforced today a bit more on hearing about the evils of the DEWline. Everybody talks about the old abandoned DEWline sites and all of the things that go along with them that contaminate the environment surrounding the DEWline sites. I know they dumped an awful lot of lumber, an awful lot of oil drums that contain fuel oil and gasoline and things of that nature and the occasional bulldozer and the occasional compressor and stuff like that. But I wonder exactly how much they did contribute to the contamination by PCBs in the North. I realize that their capacitors do have certain amounts of it and so do transformers, but a number of them were contained units. But the majority of items and the majority of sites, in my opinion, from what I

have known of it, did not contribute that much to it. Maybe these things should be pointed out and clear too, so that we do not throw people off the track.

I know that in the western part of the Territories, I saw a lot of the stuff pass through the community that I was born and raised in. As a matter of fact I was working on the tugboats when this stuff went through, miles of barges with stuff for the DEWline, and that is only for the western part. I do not think the effects are from the DEWline, per se, but there may be incidents. I do not know if any study has ever been done or the newspeople have ever bothered going to these places and having a look to see exactly what the problem is, if in fact they are contaminating.

Airborne Contaminants

But I think much more than the DEWline, I think from what I have heard here today, the culprit that we have to be looking for is the airborne contaminants. Figures that we are given here of some six tons of PCBs arriving in the North each year. I am not sure if this is concentrations and mixed with other kinds of things, but if you are going to take these figures and start breaking them down into pounds and pounds into gallons and gallons -- you are talking six tons of pollutants, you are looking at about 1200 gallons. That seems an extraordinary amount. I would be very concerned as to where these are coming from. What industry, what country puts into its atmosphere six tons of this particular thing that we are talking about? I do not know what concentrations we are looking at here but I would certainly like to know that.

The other thing I would not mind hearing a bit more about, where the other things that are affecting the food chain -- somewhere along the way I read and learned that pesticides and things from irrigated land would be distilled out into the atmosphere in a fairly concentrated form, carried along in the winds, then precipitated in the colder climates into droplets, and then settle down on the land. Is this accurate information that I am reading? To what degree are we facing in the North now, this particular form of contamination? Where would the PCBs come from?

CHAIRMAN (Mr. Zoe): Mr. Bangay.

DEWline Sites Not Contributing

MR. BANGAY: Thank you. If I might be allowed a comment before I answer the question. I hope that when we leave here today one of the things that I may have been able to lay to rest is the problem of PCBs associated with abandoned DEWline sites. I hope that there will be some confidence that these abandoned sites have not been making a contribution to this larger environmental problem that we are looking at. There was a problem at those sites, governments have acted to deal with that problem and all of the evidence indicates that we have been successful. I hope that we can leave it at that.

I would like to make one correction in terms of your observation, and I think this is very important because we do not want this to be misinterpreted. The calculation of PCB deposition over the area of the North was approximately six tons over a 10 year period. Not a one year period. It is extremely important that we remain precise about these because we are being reported and these things do get...

---Laughter

Now in terms of your question about where it is coming from. If I could go back to my earlier comments. In Canada it was not until 1977 that we restricted the so-called open uses of PCBs. In other words, PCBs were in a lot of things, systems that had access to the environment were very easy as no one was controlling them. No one recognized them as a particular problem. It was not until 1977 that the government said, "No, no further uses in those systems." So they were still being used in closed systems, between 1977 and 1980. It was not until 1980 that we stopped manufacturing and importing them for use in closed systems. And there is still an enormous quantity of PCB that is in these closed systems all over Canada and for that matter, all over the industrial world.

A lot of that equipment has been through its period of wearing out and not being used, being discarded and dumped in landfill sites where even now that equipment is breaking down and PCBs are being released to the environment because PCBs do vaporize, the lighter fractions do vaporize and enter the atmosphere, so there is an enormous amount of PCB that is out there that has not been properly dealt with. The only effective way to deal with PCBs is to destroy them at high temperature. Incineration. There is only one place at this time in Canada that is approved to do that, in Alberta. So the rest of the PCBs are in situations that are not viable in the long term.

This will continue to be a source of trouble to the environment until those PCBs are in fact destroyed. That is just the Canadian situation. The situation exists in other countries and I am sure there are other countries where we do not know very much at all about what is happening vis-a-vis their PCBs where their controls are probably less stringent than ours are. In terms of your third question on pesticides, I would like to ask Dr. Muir to respond to that one.

CHAIRMAN (Mr. Zoe): Dr. Muir.

MR. MUIR: Yes, Mr. Chairman. What the Member mentioned in terms of whether they distil out of the soil and go into the atmosphere, this is quite true and is something that was only recognized long after pesticides like DDT and toxaphene had been used for many years. It was recognized in the late 1960s that when pesticides were applied for example, to cotton fields where they were used very, very extensively in the southern US and they were applied in pounds per acre every year, as much as 20 per cent every year even though it was applied to the soil it would volatilize into the air and be carried in the atmosphere. So the use of these chemicals especially during the 1960s and 70s when their peak use occurred -- I am talking about chlordane, toxaphene, DDT -- resulted in a large fraction of the total of millions of tons that were used in the world, being distributed in the atmosphere and moving long distances. So we certainly have every reason to be concerned about the atmospheric route to all of Canada but in particular here to the Arctic.

CHAIRMAN (Mr. Zoe): Thank you. Richard Nerysoo.

MR. NERYSOO: Thank you, Mr. Chairman. Firstly let me say to those that are here, I think we appreciate the fact that you are here making the presentation to probably address some of the, not the anxieties but the fears, that have resulted from your release of the information of your reports. Because it is far more than just anxiety. The other point I wanted to make is that ICC and I think those under the leadership of Mary Simon, are taking an important leadership role in terms of trying to develop some direction for governments in this world as to how they deal with the Arctic and the circumpolar regions. I think they are to be commended for that because without their efforts many people would not be prepared to deal with some of the more important issues that affect the Inuit and the aboriginal people of the circumpolar regions.

I wanted to make a number of comments because I think we can all argue about the information that is being provided to us and these medical professionals can say that their information and their methodology of scientific research is a little better than another individual. The simple fact is that next year someone may come along and prove your information wrong. That happens in all situations on all scientific studies. I must say though that I think the concern that has been raised by the Inuit in the particular case and in relationship to Broughton Island is reasonable to expect. It is a simple fact that they have to be concerned because as much as we might say we are not certain of the effects, the simple fact is that contaminants and toxic wastes no matter what they are, have been proven to have a detrimental effect on the health not only of Inuit but the health of other peoples in this world. It has been proven.

Research Necessary To Find Solutions

What I think has to be dealt with is what is it that we are now going to do to ensure that the kind of serious health problems that have arisen throughout the world are not encountered by the Inuit or for that matter, the people of the NWT or generally speaking, of the Arctic regions. What are

we going to do? The other thing is of course an issue important to the medical professionals here today, and it is whether or not governments are prepared to commit themselves to do the necessary research work to find solutions. It seems that is never the case. We raise a particular issue of this type as has been the case by medical professionals but our governments are not prepared to do anything about it. I do not necessarily mean the GNWT. I mean the federal government because they are not in my opinion committed to dealing with some of the more serious medical problems that arise in our country.

One other important aspect is that I want to give you an illustration of is the concern I have about the use of pesticides. You might say that is probably because I am from an area in the western NWT and not in what you call the Arctic but I had a question here in this Assembly asking whether the Minister of Health or for that matter the Department of National Health and Welfare had conducted research with regard to the effects of DDT on the people of the NWT. In terms of part of the response, it listed the fact that the federal government had determined and deregistered that particular pesticide. But part of the response read, "I continue to feel there is no need for further review of the issue of DDT usage in the NWT." Now that is a real reflection of some of the attitudes that exist with toxic waste, chemical use, not only in the NWT, but generally throughout Canada and throughout the world. Governments do not care about the long-term effects. I think that we have to rid ourselves of those attitudes. Because to me it is important that we ensure the well-being and the health of our communities and the people that reside here in the North.

I assume that I am a bit biased by saying the North; the same situation could apply to southern Canadians or for that matter, peoples in other countries. But I just wanted to make those comments because I believe that for whatever reason and despite the magnitude of the problem, we can all say, "Well there are certain levels of problems." The simple fact is that we have encountered a problem in terms of potential medical risk for our people and we have finally realized that the problems of environmental security for our own use, whether it be with regard to the animals or our own personal use, must be addressed. I only hope that when we leave this item that it is with the intention of not only having addressed it in terms of making public the information you have, but at least with the intention of trying to convince other governments and other peoples to take the issue more seriously.

Tolerable Levels For PCBs

I also have a number of questions. Maybe for clarification sake, in terms of the information that was provided to us and I believe it was dealt with by Mr. Patterson where you are dealing with the question of PCB content in breast milk. There was an indication that content fell within the range of Canadian women. Could you explain to me, where in the range, was it at the top end or bottom end or where?

CHAIRMAN (Mr. McLaughlin): Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, we mentioned earlier that there were only a small number of samples available for study. We have results for four. I cannot recall precisely the numbers, but three of the four were in the same order that one would expect to find at the middle of the range or perhaps toward the upper end of that range. And one was above that by twofold. There is a tolerable level for breast milk, just as there is a tolerable level for PCB intake. The tolerable level is 50. Three of the results were below 20 or 25 at most and one of them was 62.

CHAIRMAN (Mr. McLaughlin): Mr. Nerysoo.

MR. NERYSOO: In terms of levels of toxics, for instance in sea mammals, there was an indication that they were going down. If you could explain how the calculations were made and whether or not they are presently safe in terms of being edible and whether or not they were safe before. Also, what is the intention of the researchers who are communicating some of the problems that might arise if there is an indication that the research shows that the toxic levels are beyond those of health standards?

CHAIRMAN (Mr. McLaughlin): Mr. Muir.

MR. MUIR: Mr. Chairman, I can comment on the levels in the sea mammals and to what extent they have declined. The best information is for ringed seal and unfortunately it is from only one location and that is from the Holman Island region, in which the study was done in 1972 and repeated again with animals that were hunted in 1981. In both cases the researcher was careful to have both male and female seals -- because as we have indicated earlier there are differences in PCBs between the sexes -- and also to be aware of the age of the animals and their blubber thickness and these sorts of things. When comparing these two groups, they found a decline in PCBs between 1972 and 1981 of about 60 per cent. They also found a decline in the total DDT in the blubber, not quite as large, but nevertheless a decline. That is only two points in time and it was just two chemicals.

There is a larger range of contaminants that we really should be dealing with, so we do not have any information on declines, or increases for that matter, in toxaphene or chlordane, which are also found in about equal concentrations to PCBs in ringed seals. We also do not have any information for belugas or other sea mammals, so we really need more information; but that information is certainly showing that trend. Sea birds sampled in 1976, and again in 1987, showed a decline of about 50 per cent in PCBs and DDT.

Those two groups of animals showed this decline. Polar bears, as was mentioned earlier, did not show this trend over a longer period between 1969 and 1984. There was an increase of twofold in the PCBs in the fat of the bears, so this contradicts that information and just underlines again the need for additional study to make sure that, in fact, the levels, at least of PCBs, are declining, and to determine the trend or the direction of the other contaminants. Perhaps Dr. Kinloch could address some of the other issues that were raised.

CHAIRMAN (Mr. McLaughlin): Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, in terms of what must be done, or what might be done, when contaminant levels exceed what is considered acceptable, I would like to restate the process through which the tolerable level is determined and how a judgment should be arrived at. First of all, the tolerable level must be determined, based on studies of animals. Then the daily intake of all the foods containing the contaminant must be determined, and the two compared. At that point, there must be a judgment made regarding the benefits that are provided by the foods which contain the contaminants. On the basis of those three factors -- contaminant in the food, the amount of the food and contaminant consumed, and the benefits that accrue from the use of that product or food -- a judgment is made, either that the risk is much smaller than the benefit, and therefore the level of contamination can be accepted; or that there is concern that the risk may exceed the benefit, in which case a recommendation might be made for a change in dietary intake, a change in the diet, a change in the foods eaten -- either in the type of food eaten, the frequency with which the food is eaten, or the amount in which the food is eaten.

In the current instance, in relation to PCB contamination of Inuit foods, it appears that the calculation falls heavily on the side of benefit, and that therefore, although there were 12.3 per cent of people in Broughton Island whose intakes exceeded the "tolerable" level, no recommendation for dietary change would be warranted.

CHAIRMAN (Mr. McLaughlin): Mr. Nerysoo.

Levels Of Toxaphene In Fish

MR. NERYSOO: Thank you, Mr. Chairman. I would like to move away from the issue of PCBs for a second. What has been the result of the studies in terms of toxaphene in burbot and loach?

CHAIRMAN (Mr. McLaughlin): Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, the field work for the study of toxaphene intake -- not just the toxaphene levels in fish -- has been completed. The data is now being analyzed by Professor Kuhnlein's staff at McGill. There are no results available. Results were promised prior to the next fishing season, and they will be ready by then.

CHAIRMAN (Mr. McLaughlin): Mr. Angottitauruq.

MR. ANGOTTITAUURUQ: Thank you, Mr. Chairman. While the experts are here, maybe I will go back to the question I raised in the House on February 15th. On that day I was talking about a talk show that was produced out of Rankin Inlet and in that talk show, the scientist's name was Dr. Rosalie Bartel and she was with the World Association of Concern for Public Health and she is from Toronto. She is a scientist and she just happens to be a nun. Being interested in the pollution of the whole world, in fact, and mainly in the NWT where the consumption of country food is taken a whole lot by the natives, in that talk show she mentioned that there were these electrical testers that were supplied to Swedes and Laps who consume a lot of country food, to test the meat. I guess this tester indicates how much by gauge, I do not know, and it shows if the meat is contaminated or it is safe to consume.

To be concerned about the contaminants in our food, I think this tester would be a good source for information in the communities because she stated that these testers were able to be brought to small communities so they probably are not huge. If the Swedes and Laps are using it without training to find out about contaminants, they probably do not need a specialist to operate them and that is the way I understood it from the talk show. I guess the question I am asking is, does any of the panelists know anything in regard to these testers? They have got to be not very big. That is the question I have, Mr. Chairman.

CHAIRMAN (Mr. McLaughlin): Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, I presume from the timing of that talk show that the subject might have been the contamination of reindeer as a result of the Chernobyl episode and that the testing was for radiation, using a counter device. In fact there is such a device in Rae-Edzo today but it is measuring radiation in people rather than radiation in caribou. The testing device is useful under circumstances where there has been a heavy pollution load such as following the Chernobyl explosion. But under the situation here, where the levels are relatively low and can be determined on a general basis to be below a level of concern, I do not think the use of portable counter would be helpful.

I think the Member may be reassured by the results that Dr. Tracy produces from his examination of people in the Keewatin and here at Rae-Edzo, that in fact the radiation levels in people are acceptable. Dr. Tracy's group already believes that to be the case and the testing which is going on right now is simply to make sure that is the case.

CHAIRMAN (Mr. McLaughlin): Mr. Crow.

MR. CROW: Thank you. I would also like to thank the scientists for coming to our Legislature and also Mary Simon and Bill Erasmus. I would like to thank John Amagoalik, the president of the Inuit Tapirisat of Canada and Mary Simon for alerting my constituents in early January about this topic we are discussing this afternoon.

My constituency, Hudson Bay, has been mentioned a few times this afternoon and the people I represent live on the islands in the southeast corner of Hudson Bay, the group of islands called the Belcher Islands. When we began to hear about these contaminants in our food chain, the people I represent were really concerned and they wanted me to find out what kind of contaminants there are. The people of the Belcher Islands live on ringed seals all year round, eider ducks all year round and seafood such as mussels, sea urchins, sea cucumbers, that kind of food, and cod fish. They were alarmed to hear that some of this food might be contaminated with PCBs. My people also hunt polar bear and they also eat beluga during the summer.

I was interested a few hours ago when my honourable colleague for Yellowknife Centre asked how Broughton Island was chosen. I am also interested in that question, because when we began to hear that these different contaminants might be found in our food chain, they wanted to get more information or they wanted their food to be studied to see if they are contaminated also. So did the people who studied Broughton Island include seafood like mussels, sea urchins, sea cucumbers, codfish?

CHAIRMAN (Mr. McLaughlin): Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, the foods studied were all of the food eaten in the community of Broughton Island during any one of the seven survey periods. They did include mussels, did include cod, did not include sea urchins, and did include ringed seal. The food list is limited only by the availability to the Broughton Island community, which might differ slightly from the range of foods available to residents of your community.

CHAIRMAN (Mr. McLaughlin): Mr. Crow.

MR. CROW: When you answered Mr. Lewis's question you said that looking at the harvest study in the Baffin Region, the people in Broughton Island seemed to consume a lot of country food. Same with my people. We live on the islands and all year round they consume polar bear meat, seal meat, beluga and sea birds and seafood. Therefore I guess I would have to say, I hope there will be better co-operation between the governments and the scientists and also the associations like ICC, ITC, Dene and Metis associations. I hope if these organizations ask for information, I hope that there will be more co-operation in the future. Thank you, Mr. Chairman.

CHAIRMAN (Mr. McLaughlin): Mr. Zoe, you have not had an opportunity to speak yet. Would you like to make a comment?

Motion To Extend Sitting Hours, Carried

MR. ZOE: Mr. Chairman, can I seek unanimous consent to extend sitting hours? Mr. Chairman, I move that we extend sitting hours to conclude the item under consideration.

CHAIRMAN (Mr. McLaughlin): You made it with five seconds to spare, Mr. Zoe. There is a motion on the floor to extend sitting hours. It is not debatable. All those in favour? Opposed? The motion is carried to extend sitting hours.

---Carried

Mr. Ernerk next.

MR. ERNERK: (Translation) Thank you, Mr. Chairman. This is going to be a very brief question. Perhaps I will ask three questions. I would like to ask some of the questions that were asked by Charlie Crow. Some of the sea mammals, the meat of the sea mammals that were tested, have you studied the shrimps also and also some of the little animals in the sea, on the bottom of the sea? Have you studied some of these living things?

I also would like to ask if you have studied the geese that arrive in the North in the spring. Have you studied any of the wildlife that come up to the North, because we also consume the meat of the birds? Have you also studied the lakes that we use, in summer or winter, because we also get ice water in the winter time? Have you studied the ice blocks also in the lakes? I will leave it at that, Mr. Chairman and I will ask a supplementary question later on once this is answered.

CHAIRMAN (Mr. McLaughlin): I should just let Members realize that our witnesses have a plane to catch at 5:50 p.m. so we only have a very limited period of time here. Dr. Muir.

MR. MUIR: Mr. Chairman, I can respond to some of the aspects of the question. As far as I am aware we have not studied shrimp either in Broughton Island or anywhere else in the Arctic and

it certainly, because it is an important component in the food chain, should be examined. We have thought about examining it but have not done so.

In terms of birds arriving from the South I am not certain, there has been a very limited amount of work but actually I am not sure of the results. I would have to look that information up. I do not have that information at my finger tips but there has been a very limited amount of study for example, on gulls and terns which may migrate long distances. The other animal that I know arrives from the South is the harp seal which has been studied extensively. It migrates up the Labrador coast and the levels in that animal are a little higher than they are in the ringed seal which is resident in the Arctic. In terms of ice, very limited amount of work but very low levels or virtually undetectable levels of these organic contaminants are found in ice. I hope that is a satisfactory response. I am sorry I do not have all the information at my finger tips.

CHAIRMAN (Mr. McLaughlin): Mr. Ernerk.

MR. ERNERK: Thank you, Mr. Chairman. I know that the gentlemen have to go and I would just like to give them some advice. I think the meetings that you had today should not end in this room. I believe, like Mr. Crow, that you should go to the communities more to meet with various organizations such as the Keewatin Inuit Association, regional councils, as well as health boards. They are the ones who also communicate quite a lot with the people that they represent. I would just like to make that suggestion. Thank you, Mr. Chairman.

CHAIRMAN (Mr. McLaughlin): Thank you. Mr. Gargan, I have you down to speak, and you should be aware that the witnesses have a plane in about 50 minutes. We are trying to conclude the debate for today. Thank you.

Studies On Uranium Mine At Port Radium

MR. GARGAN: Okay, Mr. Chairman. I believe in 1964 there was a study done on the Port Radium mine on Great Bear Lake. I would like to know why the study was never made public, first of all. The other question I have is with regard to atoms or radon gas. When it dissolves in the atmosphere it falls down to earth, and it is called polonium. It gets into the food chain. Could you clarify, in terms of radio-activity, what cesium levels are or becquerel levels. Are they related to radio-activity in meat? Could you clear that up for me.

CHAIRMAN (Mr. McLaughlin): Dr. Kinloch.

DR. KINLOCH: In terms of the radio cesium levels in the surveys conducted over two periods, one during the winter and one in the spring of 1986 and 1987, the becquerel levels in caribou ranged from 300 per kilo to about 1100 per kilo, with the highest levels found on Ungava and decreasing as you move west. The levels were roughly the same during both periods.

CHAIRMAN (Mr. McLaughlin): Mr. Gargan.

MR. GARGAN: I do not get an answer to my other question on the study that was done on the uranium mine that was at Port Radium. The results of that study were never made public, and I wanted to know if he was aware of that study and why it was not made public. The other thing, with regard to becquerel levels in meat, how long do these levels stay? You are talking about radiation levels and there must be a certain life span. How long do these levels last in the meat?

CHAIRMAN (Mr. McLaughlin): Dr. Kinloch.

DR. KINLOCH: Mr. Chairman, I have seen the reports both on Port Radium and at Rayrock. I was not aware they had not been made public. They have certainly been the subject of a great deal of discussion here in the Territories and the general findings, I should think, would be available from one of the departments of government.

In terms of the levels of radio cesium and their persistence, it depends very much on what the caribou is eating. If the caribou is eating contaminated lichen, then the radio cesium will remain in the body. If the caribou proceeds to clean forage, then the radio cesium disappears relatively rapidly within a matter of weeks. The same applies to human beings. If they are eating caribou contaminated with radio cesium, and then stop eating that caribou, the radio cesium will disappear from their bodies. The half-life of radio cesium itself is 30 years, but that is outside of a biological system which can get rid of the radio cesium.

CHAIRMAN (Mr. McLaughlin): Mr. Gargan.

MR. GARGAN: In other words, it is still there then. If it is not in the caribou, it is still maybe within the vegetation or in other forms.

CHAIRMAN (Mr. McLaughlin): Dr. Kinloch.

Rate Of Decay Of Radiation

DR. KINLOCH: The half-life of radio cesium in lichens and mosses in the NWT ranges from about six to eight years. Radio cesium ultimately decays into stable elements, so the radiation does not persist forever. It decays at that rate of halving its amount, reducing its amount by 50 per cent every 30 years until ultimately it is all gone. That is what is happened to the radiation that fell out from the atmospheric bomb tests back in the 1960s.

CHAIRMAN (Mr. McLaughlin): Mr. Gargan.

MR. GARGAN: Thank you, Mr. Chairman. Just one final question. Mr. Chairman, uranium mining is one of the most hazardous of all mining industries. I would like to ask whether or not in all the history of uranium mining was there ever a base study done before uranium mining started because as far as I know with regard to the mines in northern Saskatchewan and Australia there was never an environmental assessment done or human studies done or water studies or plantation studies done prior to a uranium mine being started. I would like to ask whether or not there was ever a base study before the mining industry moved in. If there is I would like to know that there was.

CHAIRMAN (Mr. McLaughlin): Dr. Kinloch.

DR. KINLOCH: I am not really familiar with the literature. I am not personally aware of extensive environmental assessments prior to the opening of mining. I am aware of what is going on in the Territories now.

CHAIRMAN (Mr. McLaughlin): Are Members agreed that we have concluded our requirements of having the witnesses here? Can we excuse them now? Agreed?

SOME HON. MEMBERS: Agreed.

---Agreed

MR. GARGAN: Not really.

CHAIRMAN (Mr. McLaughlin): I would like to thank the witnesses for bearing with us for the length of time that they did and the briefing Members had last evening as well. Thank you very much for being here. We will excuse you now. I think some Members have some motions they want to make. So thank you very much doctors, ladies and gentlemen.

Are there any Members that want to pursue this debate or can I consider it concluded then? Are Members agreed that the item under debate is concluded for today. Agreed?

SOME HON. MEMBERS: Agreed.

---Agreed

CHAIRMAN (Mr. McLaughlin): Mr. Gargan.

MR. GARGAN: Mr. Chairman, we do not have enough Members here. I would like to go ahead and report progress.

CHAIRMAN (Mr. McLaughlin): There is a motion, non-debatable on the floor to report progress. All those in favour? Opposed? Thank you. I will report progress then.

MR. SPEAKER: The House will come back to order please. Mr. McLaughlin.

ITEM 18: REPORT OF COMMITTEE OF THE WHOLE

REPORT OF COMMITTEE OF THE WHOLE OF CONSIDERATION OF THE MATTER OF ARCTIC CONTAMINANTS

MR. McLAUGHLIN: Thank you, Mr. Speaker. Your committee has been considering the matter of Arctic contaminants and wishes to report progress.

MR. SPEAKER: Thank you, Mr. McLaughlin. The House has heard the report of the chairman of the committee of the whole. Are you agreed?

SOME HON. MEMBERS: Agreed.

---Agreed

MR. SPEAKER: Thank you. The House is agreed.

Item 19, third reading of bills. Item 20, assent to bills. Mr. Clerk, would you ascertain if the Commissioner of the NWT is available to give assent to bills?

ITEM 20: ASSENT TO BILLS

COMMISSIONER PARKER: As Commissioner of the Northwest Territories and by authority vested in me by the Northwest Territories Act, I hereby assent to the following bills: Bill 2-89(1), Bill 5-89(1), Bill 6-89(1), Bill 8-89(1), Bill 9-89(1), Bill 11-89(1) and Bill 12-89(1). Thank you.

---Applause

MR. SPEAKER: The House will come to order please. In accordance with the powers given by Motion 12-89(1), the hours of sitting for Monday, March 13th, will be from 10:00 a.m. to 12:00 noon and from 1:30 p.m. until the committee reports progress. Item 21, Mr. Clerk, orders of the day.

CLERK OF THE HOUSE (Mr. Hamilton): Announcements, Mr. Speaker. There will be a meeting of the special committee on the northern economy tomorrow morning at 9:00 a.m. and a meeting of ajuqtit at 9:00 a.m. on Monday morning.

ITEM 21: ORDERS OF THE DAY

Orders of the day for Monday, March 13th.

1. Prayer
2. Ministers' Statements

3. **Members' Statements**
4. **Returns to Oral Questions**
5. **Oral Questions**
6. **Written Questions**
7. **Returns to Written Questions**
8. **Replies to Opening Address**
9. **Petitions**
10. **Reports of Standing and Special Committees**
11. **Tabling of Documents**
12. **Notices of Motion**
13. **Notices of Motion for First Reading of Bills**
14. **Motions**
15. **First Reading of Bills**
16. **Second Reading of Bills**
17. **Consideration in Committee of the Whole of Bills and Other Matters: Consideration of the Matter of Arctic Contaminants; CR 1-89(1); Bills 1-89(1), 3-89(1), 7-89(1), 10-89(1); Tabled Document 58-89(1), Tabled Document 59-89(1); Ministers' Statement 15-89(1)**
18. **Report of Committee of the Whole**
19. **Third Reading of Bills**
20. **Assent to Bills**
21. **Orders of the Day**

MR. SPEAKER: Thank you, Mr. Clerk. This House stands adjourned until Monday, March 13th, at 10:00 a.m.

---ADJOURNMENT

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Government of the Northwest Territories, Yellowknife, N.W.T.
\$1.00 per day; \$40.00 for 1st session, \$20.00 for 2nd and 3rd session; or \$60.00 per year
Published under the Authority of the Speaker of the Legislative Assembly
of the Northwest Territories