

DEVELOPMENT OF THE CANADIAN APPROACH TO THE USE OF ASBESTOS

INTRODUCTION

MR. CHAIRMAN.....

BEFORE BEGINNING MY PRESENTATION, I WOULD LIKE TO THANK YOU FOR THE INVITATION EXTENDED TO THE CANADIAN DELEGATION AND FOR THE OPPORTUNITY THIS GIVES US TO PROVIDE YOU WITH INFORMATION ON CANADA'S EXPERIENCE WITH REGARD TO THE SAFE USE OF CHRYSOTILE ASBESTOS.

I WOULD LIKE TO BEGIN WITH A BRIEF HISTORY OF THE ASBESTOS INDUSTRY IN CANADA BEFORE OUTLINING FOR YOU THE CANADIAN GOVERNMENT'S POLICY ON ASBESTOS.

IT IS TRUE THAT CANADA HAS BEEN PRODUCING AND EXPORTING CHRYSOTILE ASBESTOS SINCE THE 1880s. BY THE MID 1970s, WE HAD REACHED OUR MAXIMUM PRODUCTION OF APPROXIMATELY 1.7 MILLION TONNES, ABOUT HALF OF WHICH WAS EXPORTED TO THE UNITED STATES. AFTER THAT, PRODUCTION DECLINED DRAMATICALLY UNTIL REACHING ITS CURRENT LEVEL OF APPROXIMATELY 300,000 TONNES. PRODUCTION HAS REMAINED STABLE AT THIS LEVEL, MAKING CANADA THE THIRD-LARGEST PRODUCER IN THE WORLD. IN THE HEYDAY OF ASBESTOS PRODUCTION, FOUR CANADIAN PROVINCES HAD MINES, BUT PRODUCTION IS NOW ENTIRELY CONCENTRATED IN QUEBEC. MOST OF WHAT IS PRODUCED IS EXPORTED TO OVER 60 COUNTRIES AND GENERATES REVENUES OF APPROXIMATELY \$200 MILLION.

THE MINING OF CHRYSOTILE ASBESTOS PROVIDES EMPLOYMENT FOR APPROXIMATELY 1,500 PEOPLE, AND ENTIRE COMMUNITIES ARE COMPLETELY DEPENDENT ON THE INDUSTRY. THE CLOSURE OF MINES WOULD RESULT IN THE DISAPPEARANCE OF THESE COMMUNITIES.

AS YOU CAN SEE, CANADA HAS LIVED AND WORKED WITH ASBESTOS FOR OVER A CENTURY.

AS A RESULT, THE COUNTRY HAS A GREAT DEAL OF EXPERIENCE AND EXPERTISE RELEVANT TO ASBESTOS. NOT ALL OF THIS EXPERIENCE HAS BEEN POSITIVE. IN FACT, CANADA WAS ONE OF THE FIRST COUNTRIES TO HAVE TO DEAL WITH THE DANGERS OF ASBESTOS. WE KNOW, FOR EXAMPLE, THAT WORKERS EXPOSED TO VERY HIGH LEVELS OF ASBESTOS FIBRES AND DUST OVER LONG PERIODS OF TIME WILL DEVELOP LUNG DISEASE.

THE CONTROLLED-USE APPROACH

IN THE MID 1970s, THE CONTROVERSY SURROUNDING ASBESTOS REACHED ITS PEAK WHEN IT WAS DEMONSTRATED THAT AN INCREASED CANCER RISK WAS ASSOCIATED WITH PREVIOUS PROLONGED EXPOSURE TO VERY HIGH LEVELS OF FIBRES.

AGAINST THIS BACKDROP OF SCIENTIFIC INFORMATION AND BECAUSE OF CONCERNS FOR THE HEALTH OF ITS WORKERS, THE CANADIAN GOVERNMENT ESTABLISHED A FEDERAL/PROVINCIAL WORKING GROUP ON ASBESTOS IN 1979. THE MANDATE OF THIS GROUP WAS TO DEVELOP A SCIENTIFICALLY BASED APPROACH TO THE REGULATION OF ASBESTOS.

A PARALLEL ROYAL COMMISSION OF INQUIRY WAS SET UP IN THE CANADIAN PROVINCE OF ONTARIO TO EXAMINE MATTERS OF HEALTH AND SAFETY ARISING FROM THE USE OF ASBESTOS. THIS COMMISSION'S TASK WAS TO SPEND TWO YEARS GATHERING THE LATEST SCIENTIFIC FINDINGS ON THE SUBJECT FROM THE TESTIMONIES OF 53 INTERNATIONAL EXPERTS.

BASED ON THIS WORK, IN 1983, THE FEDERAL AND PROVINCIAL GOVERNMENTS APPROVED A DOCUMENT ENTITLED *THE CURRENT APPROACH TO THE REGULATION OF ASBESTOS IN CANADA*. IN ESSENCE, THIS DOCUMENT ADVOCATED A CONTROLLED-USE APPROACH WITH REGARD TO THE REGULATION OF ASBESTOS IN CANADA.

WHAT IS MEANT BY A CONTROLLED USE APPROACH? IT MEANS ENFORCING APPROPRIATE REGULATIONS AIMED AT RIGOROUSLY CONTROLLING EXPOSURE, IN ORDER TO REDUCE TO ACCEPTABLE LEVELS THE RISKS ASSOCIATED WITH OCCUPATIONAL EXPOSURE TO

CHRYSTOLE DURING MINING, MILLING, PRODUCT MANUFACTURE, TRANSPORTATION AND HANDLING, WHILE ACKNOWLEDGING THAT A ZERO-RISK LEVEL IS IMPOSSIBLE TO ACHIEVE. CONVERSELY, WHERE EXPOSURE, AND CONSEQUENTLY RISK CANNOT BE PROPERLY CONTROLLED, A SPECIFIC USE SHOULD BE DISCONTINUED OR PROHIBITED. HENCE, ASBESTOS INSULATION HAS BEEN BANNED IN CANADA SINCE 1978.

THIS PRINCIPLE, WHICH IS BASED ON RISK ASSESSMENT AND RISK MANAGEMENT AND WHICH WE NOW REFER TO AS THE SAFE-USE PRINCIPLE, IS A MODEL THAT NOT ONLY APPLIES TO ASBESTOS BUT CAN BE EXTENDED TO MINERALS AND METALS SUCH AS LEAD, MERCURY, CADMIUM, ZINC AND NICKEL, WHICH ARE POTENTIALLY HAZARDOUS UNDER CERTAIN CONDITIONS, BUT WHICH ARE NEVERTHELESS IMPORTANT TO OUR SOCIETY.

IN OUR VIEW, THIS PRINCIPLE ALSO REPRESENTS A MORE RATIONAL APPROACH TO MANAGING THE HAZARDS ASSOCIATED WITH SUCH SUBSTANCES THAN THE TOTAL BAN CALLED FOR BY CERTAIN GROUPS. IF WE VENTURE DOWN THE PATH TOWARD BANNING NATURAL SUBSTANCES, WHERE DOES IT END? AT SOME POINT, WE WOULD HAVE TO OUTLAW NATURE ITSELF BECAUSE MANY OF THESE SUBSTANCES ARE INTEGRAL PARTS OF THE ENVIRONMENT.

WILL THE FACT THAT A SUBSTANCE IS CARCINOGENIC BE SUFFICIENT TO CAUSE US TO DECIDE TO BAN IT? IF SO, WE ARE GOING TO HAVE TO START BANNING A LOT OF NATURAL PRODUCTS, BEGINNING WITH COFFEE, WHICH CONTAINS SEVERAL KNOWN CARCINOGENS, AND TOBACCO, TO WHICH MUCH OF THE NON-SMOKING POPULATION IS EXPOSED VIA SECOND-HAND SMOKE.

SCIENCE AND POLICY

ON THE BASIS OF AN EXTENSIVE EXAMINATION OF ALL THE SCIENTIFIC EVIDENCE, THE GOVERNMENT OF CANADA HAS RECOGNIZED AND CONCLUDED THAT:

- 1- ASBESTOS IS A NATURALLY OCCURRING SUBSTANCE IN THE AIR WE BREATHE AND IN THE WATER WE DRINK;

- 2- THE ASBESTOS PROBLEM IS FUNDAMENTALLY A DUST PROBLEM;
- 3- ASBESTOS EXPOSURE IS AN OCCUPATIONAL PROBLEM, NOT AN ENVIRONMENTAL ISSUE;
- 4- CANADIAN REGULATIONS, LIKE THOSE OF MOST OTHER COUNTRIES, TAKE INTO ACCOUNT THE DIFFERENT TYPES OF FIBRES, WITH THE AMPHIBOLES BEING CONSIDERED MORE DANGEROUS THAN CHRYSOTILE.
- 5- IN TERMS OF OCCUPATIONAL RISK, CANADA RECOGNIZES THAT, FROM INDUSTRY TO INDUSTRY, THERE ARE IMPORTANT VARIATIONS IN RISKS ASSOCIATED WITH EXPOSURE. FOR EXAMPLE, THE MANUFACTURE OF ASBESTOS CEMENT PRODUCTS AND ASBESTOS FRICTION MATERIALS HAS BEEN SHOWN TO INCUR LESS RISK THAN THAT ASSOCIATED WITH THE PRODUCTION OF ASBESTOS TEXTILES.
- 6- WITH REGARD TO EXPOSURE IN BUILDINGS WITH ASBESTOS INSULATION (FRIABLE ASBESTOS), AVAILABLE DATA INDICATE THAT FIBRE CONCENTRATIONS IN THESE BUILDINGS DO NOT DIFFER SIGNIFICANTLY FROM THOSE IN AMBIENT AIR OUTSIDE THE BUILDINGS. THE ROYAL COMMISSION THAT I MENTIONED EARLIER, WHICH EXAMINED PROBLEMS OF HEALTH AND SAFETY ARISING FROM THE USE OF ASBESTOS IN ONTARIO (1984), AND THE HEALTH EFFECTS INSTITUTE-ASBESTOS RESEARCH STUDY OF 1991 BOTH ACKNOWLEDGE THAT THE HEALTH OF OCCUPANTS IS NOT AT RISK. ONLY PERSONS INVOLVED IN MAINTENANCE ACTIVITIES CAN BE SUBJECT TO GREATER RISK IF THEY ARE UNAWARE OF THE PRESENCE OF ASBESTOS AND DO NOT IMPLEMENT THE PROTECTIVE MEASURES RECOMMENDED BY LAW.
- 7- ON THE MATTER OF ASBESTOS IN WATER, AVAILABLE DATA INDICATE THAT RISKS ASSOCIATED WITH THE INGESTION OF ASBESTOS ARE NEGLIGIBLE. IN THIS REGARD, THE WORLD HEALTH ORGANIZATION DID NOT THINK IT APPROPRIATE TO SET A STANDARD FOR THE CONCENTRATION OF ASBESTOS FIBRES IN WATER. THE ORGANIZATION REGARDS THE USE OF ASBESTOS CEMENT PIPES AS ACCEPTABLE BECAUSE OF THE ECONOMICAL NATURE OF THESE BUILDING MATERIALS.

8- WITH REGARD TO ASBESTOS PRODUCTS, THOSE THAT CAN READILY RELEASE ASBESTOS FIBRES ARE PROHIBITED UNDER CANADA'S *HAZARDOUS PRODUCTS ACT*. SUCH PRODUCTS INCLUDE ITEMS USED BY CHILDREN, MODELLING PASTES, ETC.... THE ACT ALSO PROHIBITS THE USE OF LOW-DENSITY PRODUCTS SUCH AS INSULATION EXCEPT IN THE CASE OF A MIXTURE IN WHICH THE FIBRES FORM PART OF A MATRIX (AS IN THE CASE OF ASPHALT, FOR EXAMPLE). THE SALE OF FIBRES TO THE PUBLIC IS PROHIBITED, AND THE USE OF CROCIDOLITE IS STRICTLY CONTROLLED.

9- ON THE MATTER OF SUBSTITUTES, ESPECIALLY SYNTHETIC FIBRES, THE LESSONS LEARNED FROM THE UNCONTROLLED USE OF ASBESTOS SHOULD ENCOURAGE US TO EXERCISE GREAT CAUTION. SUBSTITUTES HAVE BEEN AND STILL ARE THE FOCUS OF SPECIAL ATTENTION, PARTICULARLY IN LIGHT OF RECENT SCIENTIFIC DATA.

AS EARLY AS 1986, IN ADOPTING RECOMMENDATION 172, THE INTERNATIONAL LABOUR ORGANIZATION ACKNOWLEDGED THE HAZARDS ASSOCIATED WITH SUBSTITUTE FIBRES, AND IN 1993, THE INTERNATIONAL PROGRAMME ON CHEMICAL SAFETY DIRECTED THAT ALL FIBRES THAT ARE RESPIRABLE AND BIOPERSISTENT MUST UNDERGO TESTING FOR TOXICITY AND CARCINOGENICITY; EXPOSURE TO THESE FIBRES IS ALSO TO BE CONTROLLED TO THE SAME DEGREE AS THAT REQUIRED FOR ASBESTOS UNTIL SCIENTIFIC DATA BECOME AVAILABLE THAT SUPPORT A LESSER DEGREE OF CONTROL.

IN THIS REGARD, THE RESULTS OF A RECENT STUDY ON THE BIOPERSISTENCE OF CHRYSOTILE AND CERTAIN SUBSTITUTE FIBRES (AS REPORTED TO YOU BY REPRESENTATIVES OF THE ASBESTOS INSTITUTE) CLEARLY DEMONSTRATE THAT THE USE OF THE MAIN SUBSTITUTE FIBRES SHOULD BE SUBJECT TO THE SAME RIGOROUS REGULATION AS APPLIED TO CHRYSOTILE.

THIS CONSTITUTES THE BASIS OF CANADIAN GOVERNMENT POLICY ON ASBESTOS.

CONSTRUCTION SITES

THE ARGUMENT MOST OFTEN CITED AGAINST THE USE OF CHRYSOTILE ASBESTOS, ESPECIALLY ASBESTOS CEMENT, IS THAT IT IS IMPOSSIBLE TO CONTROL ITS USE ON CONSTRUCTION SITES. WHAT IS NEEDED FIRST IS A SET OF APPROPRIATE REGULATIONS PROHIBITING, FOR EXAMPLE, THE USE OF HIGH-SPEED SAWS WITHOUT EQUIPMENT TO PREVENT DUST INHALATION (THIS APPLIES TO ALL CUTTING ON CONSTRUCTION SITES). THE NEXT STEP IS TO ENFORCE THE REGULATIONS. IF THE RESPONSE IS THAT THIS IS IMPOSSIBLE, WHAT WILL HAPPEN AT ASBESTOS REMOVAL SITES? IN THE UNITED STATES, THOUSANDS OF WORKERS HAVE REMOVED ASBESTOS WITHOUT TAKING ANY SPECIAL PRECAUTIONS, AND THE INEVITABLE RESULT WILL BE MULTIPLE CASES OF LUNG DISEASE RELATED TO EXPOSURE TO ASBESTOS. SIMILARLY, HOW DO WE CONTROL THE CUTTING OF CONCRETE, WHICH EXPOSES WORKERS TO ANOTHER CARCINOGENIC MATERIAL—SILICA—AND TO THE RESPIRATORY PROBLEMS ASSOCIATED WITH SILICOSIS.

THAT BEING SAID, IT IS IMPORTANT TO BEAR IN MIND THAT NEW TECHNOLOGY DEVELOPED BY THE MANUFACTURERS OF CHRYSOTILE ASBESTOS PRODUCTS ELIMINATES ALMOST ALL ON-SITE CUTTING, BOTH IN THE CASE OF ASBESTOS CEMENT PIPES AND ASBESTOS CEMENT ROOFING MATERIALS.

CONCLUSIONS

ENSURING THE SAFETY OF WORKERS AND MAINTAINING THE HEALTHIEST ENVIRONMENT POSSIBLE ARE OF PRIMARY CONCERN TO BOTH THE CANADIAN GOVERNMENT AND THE GOVERNMENT OF JAPAN. THEREFORE, WHEN FRANCE DECIDED TO BAN ASBESTOS IN 1996 ON THE BASIS OF THE REPORT BY THE FRENCH *INSTITUT NATIONAL DE LA SANTÉ ET DE LA RECHERCHE MÉDICALE* (INSERM), THE CANADIAN GOVERNMENT ASKED THE ROYAL SOCIETY OF CANADA TO SET UP A COMMITTEE OF INTERNATIONAL EXPERTS TO REVIEW THE REPORT. CANADA DID SO IN THE BELIEF THAT FRANCE MIGHT HAVE OBTAINED NEW DATA JUSTIFYING THE NEED TO BAN CHRYSOTILE ASBESTOS. THE ROYAL SOCIETY OF CANADA COMMITTEE CONCLUDED THAT THE INSERM REPORT OFFERS NO NEW SCIENTIFIC DATA AND EXAGGERATES THE RISKS ASSOCIATED WITH ROUTINE EXPOSURE TO CHRYSOTILE ASBESTOS.

IN THE CONTEXT OF INTERNATIONAL TRADE, IT IS BECOMING INCREASINGLY IMPORTANT TO APPLY CONSISTENT APPROACHES TO THE FORMULATION OF POLICY AND REGULATIONS FOR SEVERAL REASONS. FIRST, THERE IS A MOVE TO NORMALIZE LABOUR STANDARDS AT THE INTERNATIONAL LEVEL IN ORDER TO PROVIDE THE BEST PROTECTION FOR WORKERS. SECOND, IN ORDER TO AVOID THE CREATION OF NON-TARIFF BARRIERS, GOVERNMENTS MUST ENSURE THAT THEIR POLICIES AND REGULATIONS DO NOT LEAD TO DISCRIMINATION AMONG PRODUCTS WITH SIMILAR USES. WHENEVER POSSIBLE, THE BEST APPROACH IS TO SEEK INTERNATIONAL CONSENSUS AMONG INTERNATIONAL AGENCIES SUCH AS THE INTERNATIONAL LABOUR ORGANIZATION AND THE WORLD HEALTH ORGANIZATION. WITH REGARD TO ASBESTOS, SUCH A CONSENSUS WAS REACHED WHEN THE INTERNATIONAL LABOUR ORGANIZATION ADOPTED CONVENTION 162 ON SAFETY IN THE USE OF ASBESTOS.

THIRD, IT IS IMPORTANT TO RECOGNIZE THAT BANNING OR EXCESSIVELY REGULATING A SUBSTANCE OPENS THE DOOR TO SUBSTITUTE PRODUCTS, EVEN IN THE ABSENCE OF SCIENTIFIC EVIDENCE THAT SUCH PRODUCTS ARE SAFER THAN THE PRODUCTS THEY REPLACE. IN SUCH A SITUATION, IT IS CONCEIVABLE THAT ONCE SCIENTIFIC DATA ARE AVAILABLE ON THE SUBSTITUTE PRODUCTS, WE WILL DISCOVER THAT THEY ARE AT LEAST AS DANGEROUS IF NOT MORE SO THAN THE PRODUCTS THEY REPLACE. RATHER THAN IMPROVING HEALTH CONDITIONS FOR SOCIETY, WE WILL HAVE MADE THEM MORE HAZARDOUS.

AS PART OF THE DECISION-MAKING PROCESS, IT IS ALSO IMPORTANT TO ASSESS EVERY ASPECT OF A PROBLEM, PARTICULARLY THE SOCIO-ECONOMIC CONSEQUENCES. IN THE UNITED STATES, THE ENVIRONMENTAL AGENCY CUT SHORT THE ASSESSMENT PROCESS IN ITS HASTE TO BAN ASBESTOS, DRAWING SHARP CRITICISM FROM THE APPEAL COURT THAT REVERSED THE BAN. BY THE TIME THE LEGAL PROCEEDINGS WERE OVER, NOT ONLY HAD THE EMPLOYEES OF THE ASBESTOS INDUSTRY LOST THEIR JOBS, BUT SO HAD TENS OF THOUSANDS OF WORKERS WHO HAD NO CONNECTION WITH ASBESTOS OTHER THAN THE FACT THAT THEY WORKED FOR COMPANIES THAT WERE FORCED TO DECLARE BANKRUPTCY. THE RUSH TO REMOVE ASBESTOS AFTER THE INITIAL EPA DECISION COST AMERICANS OVER \$100 BILLION AND FORCED SEVERAL SCHOOL BOARDS INTO BANKRUPTCY—EVEN THOUGH EVERY STUDY INDICATED THAT WHEN THE SPRAYED ASBESTOS WAS IN GOOD CONDITION IT DID NOT

CONSTITUTE A HAZARD TO BUILDING OCCUPANTS, AND IN THE VAST MAJORITY OF CASES NO ONE WAS AT RISK. OF COURSE, THERE ARE BUILDINGS IN WHICH THE ASBESTOS IS IN POOR CONDITION AND WHERE THE ONLY OPTION IS TO REMOVE IT, BUT THE NUMBER OF SUCH CASES IS NEGLIGIBLE.

IN CONCLUSION, IT IS ALWAYS EASIER TO REGULATE A KNOWN QUANTITY THAN AN UNKNOWN QUANTITY. ASBESTOS MINERALS ARE THE MOST STUDIED GROUP OF MINERALS IN THE WORLD. SUBSTITUTE PRODUCTS, ON THE OTHER HAND, ARE LARGELY UNKNOWN IN TERMS OF THEIR EFFECTS ON HUMAN HEALTH AND THE ENVIRONMENT. FINALLY, IT IS IMPORTANT TO NOTE THAT IN LIGHT OF CERTAIN NEW DATA ON THE SUBJECT—1) THE FACT THAT CHRYSOTILE IS LESS TOXIC THAN CROCIDOLITE AND AMOSITE; 2) DATA SHOWING THAT THE MAIN SUBSTITUTE FIBRES ARE MORE BIOPERSISTENT THAN CHRYSOTILE; AND 3) DANGERS ASSOCIATED WITH PVC—MANY AGENCIES, INCLUDING THE U.S. ENVIRONMENTAL PROTECTION AGENCY AND ITS DANISH COUNTERPART, ARE PREPARING TO EITHER REDUCE THE LEVEL OF RISK LINKED TO THE USE OF CHRYSOTILE OR IMPOSE STRICTER CONTROLS ON THE USE OF CERTAIN SUBSTITUTES.

MR. CHAIRMAN, LADIES AND MEMBERS OF THE COMMITTEE.....I THANK YOU FOR YOUR ATTENTION AND WISH YOU ALL THE BEST IN CONCLUDING YOUR WORK ON THE COMMITTEE.