

TORONTO STAFF REPORT

June 5, 2001

To: Board of Health

From: Dr. Sheela V. Basrur, Medical Officer of Health

Subject: Harmonization of PCB Transfers, Decontamination and Waste Storage Procedures

Purpose:

To harmonize the policy and procedures on PCB transfers, PCB decontamination and PCB waste storage sites of the former municipalities of the City of Toronto.

Financial Implications and Impact Statement:

There are no new financial implications arising from this report. Resource requirements for the management plan of city-owned PCBs will be subject to a future report to be prepared by Facilities and Real Estate Division of Corporate Services.

Recommendations:

It is recommended that:

- (1) the Board of Health request that City Council endorse in principle a PCB management plan that results in the phase out of PCBs in the City of Toronto and that does not result in a transfer of PCBs or PCB by-products into the surrounding environment;
- (2) City Council request that the Ontario Minister of the Environment inform the City of Toronto regarding applications for PCB transfers, decontamination and storage within the City of Toronto as follows:
 - (a) send notification of applications for transfer of PCBs into the City of Toronto to the City Clerk, the Medical Officer of Health, and Toronto Fire Services;

- (b) send copies of Director's Instructions for transfers of PCBs within, through and out of the City of Toronto to the City Clerk, the Medical Officer of Health, and Toronto Fire Services in advance of any transfers taking place; and
 - (c) continue to request proponents to send a copy of applications for decontamination of low-level PCBs to the City Clerk;
- (3) City Council request the Ministry of Environment not to issue Approvals for PCB transfers into the City that result in the long-term storage of PCBs in Toronto;
- (4) the Board of Health recommend City Council adopt a destruction criterion for PCBs that reflects new international obligations and includes:
- (a) destruction efficiency of effectively 100% of all PCBs;
 - (b) complete containment of all residues and wastes; and
 - (c) no uncontrolled releases to the environment;
- (5) the City Clerk forward a copy of the applications and notifications as follows:
- (a) applications and Director's Instructions for PCB transfers to the Emergency Planning Office of Works and Emergency Services;
 - (b) notifications for decontamination of low level PCBs to Toronto Fire Services, the Emergency Planning Office and Technical Services of Works and Emergency Services; and
 - (c) copies of the applications for decontamination of low level PCBs to the Medical Officer of Health, and Toronto Fire Services, the Emergency Planning Office and Technical Services of Works and Emergency Services;
- (6) in order to improve the ability of the Toronto Fire Chief to reduce public safety risks:
- (a) Toronto Fire Services review applications for transfers and decontamination of PCBs in order to update their database and emergency response information;
 - (b) Toronto Fire Services computer-aided dispatch system, currently under development, be approved as the corporate system to incorporate information about PCB storage sites in the City of Toronto;
 - (c) all City departments, agencies, boards and commissions provide to Toronto Fire Services their inventory of PCBs in storage, including where feasible, sites containing less than 50 litres;
 - (d) Toronto Fire Services make its information on PCB storage sites available to other City divisions at their request; and,
 - (e) if in its regular surveillance activities, Toronto Fire Services identifies properties that contain unrecorded storage of PCBs or PCBs that are abandoned, Toronto Fire Services will notify the appropriate authorities including, but not limited to, the Ontario Ministry of the Environment and City Planning Division of Urban Development Services;

- (7) if there is cause for concern on receipt of applications for transfers or decontamination of PCBs, the Medical Officer of Health request the Ontario Minister of the Environment to delay approval as necessary and where warranted, and thereafter, provide comments to the Minister of the Environment and to the Board of Health on those concerns;
- (8) Solid Waste Management Services of Works and Emergency Services investigate the possibility of accepting small quantities of PCB as part of its Household Hazardous Waste program;
- (9) Facilities and Real Estate, in consultation with other relevant divisions, prepare a plan, which includes resource implications, for the destruction of the City's PCB wastes and take into consideration benefits that could be gained by co-ordinated action between all City departments, agencies, boards and commissions, as well as the feasibility of using mobile non-incineration destruction technology;
- (10) the City Solicitor, in conjunction with the City Planning Division of Urban Development Services, review the need for changes in existing by-laws to ensure the harmonisation of policy and procedures for PCB transfers, decontamination and storage with in the City;
- (11) the City Clerk forwards this report to all City departments, agencies, boards and commissions for their information and action; and
- (12) the appropriate city officials be authorised and directed to take the necessary action to give effect thereto.

Background:

City Council at its meeting of February 4-6, 1998, requested the Acting Medical Officer of Health and the Interim Functional Lead for Building, in consultation with appropriate staff, to submit a report to the Board of Health and to the Urban Environment and Development Committee, on the monitoring and securing of existing PCB storage sites in the City of Toronto. The purpose of the report was to make sure that all levels of government work together to ensure the safety of the public in PCB storage and to include details on the responsibilities of the City of Toronto and the provincial government. A report "PCB Waste Storage Management Issues in the new City of Toronto" was prepared by Toronto Public Health and submitted to the Board of Health in May 1998.

At its meeting of May 12, 1998, the Board of Health requested the Medical Officer of Health to co-ordinate the development of harmonised policies and procedures to be applied to PCB transfers, PCB contamination and PCB waste storage sites in the new City of Toronto, in consultation with the functional leads from the affected programme areas. It also requested the Medical Officer of Health to investigate the possibility of compiling a list of storage sites holding less than 50 litres of PCB and to improve the process by which abandoned sites are identified and monitored.

Toronto Public Health has reviewed the procedures of the former municipalities. This report proposes uniform policies and procedures based on consultation with relevant programme areas, the Ontario Ministry of the Environment and Environment Canada. The City departments involved in the development of this report were the City Clerks Office, Corporate Services (Employment Services Occupational Health and Safety, and Facilities and Real Estate), Legal Services, Works and Emergency Services (Emergency Planning Office, Fire Services, Technical Services, Solid Waste Management Services), and Urban Development Services. At the March 23, 2000 meeting of the Toronto Inter-departmental Environment Committee comments were invited on a draft report. There were two interdepartmental consultation sessions and on July 18, 2000, a revised report was sent to the Chief Financial Officer and the Commissioners for Community and Neighbourhood Services, Corporate Services, Economic Development, Culture and Tourism, Urban Development Services, and Works and Emergency Services for comment and to ensure concurrence with the recommendations. In addition, staff from HP & EPO held a consultation meeting with Non Governmental Organizations (NGOs) in Toronto that have an active interest in PCB management issues. To the extent possible, this report incorporates the comments received.

Comments:

Polychlorinated biphenyls (PCBs) have never been manufactured in Canada. Commercial, manufacturing and processing uses of PCBs were restricted in Canada in 1977, bringing to an end the manufacture and import of new PCB equipment and the refilling of existing equipment using PCBs. Estimates by Environment Canada showed that in 1996 about 40 percent of PCBs in Canada remained in service in older electrical equipment, 15 percent had been destroyed, 15 percent were in storage, and 30 percent were unaccounted for. Given the on-going initiatives to remove, decontaminate and destroy PCBs, the amounts presently in use or storage in Toronto are expected to be substantially less now than in 1996. In 1998 there were about 340 PCB registered waste storage sites with 50 litres or more of PCB waste in the new City of Toronto. The Ontario Ministry of the Environment indicates that, at present, there are 207 registered sites in the City that still hold PCBs. Some of these sites are sensitive sites and include some schools and hospitals. In 1999 there were about 200 transfers of PCBs for final disposal out of the City of Toronto.

In response to recommendations from the International Joint Commission, the federal, state and provincial governments of the United States and Canada have instituted the Great Lakes Bi-national Toxics Strategy for the virtual elimination of toxic substances. With respect to PCBs, the goals of this strategy are to decommission 90 percent of equipment still in use that contain high-level PCBs (more than 1% or 10,000ppm PCB) and to destroy 50 percent of high-level PCBs in storage by the year 2000 from baseline figures for 1988. These goals have also been incorporated into the Canada-Ontario Agreement Respecting the Great Lakes Ecosystem. Although the figures are not yet published, Environment Canada believes that this goal has been met.

The municipalities that formed the new City of Toronto had varying policies and procedures to handle the transfers, decontamination, and storage of PCBs. Pursuant to the recommendations of

the Toronto City Council meeting of February 4-6, 1998, and the Board of Health meeting of May 12, 1998, this report outlines uniform policies and procedures for the transfers, decontamination, and storage of PCBs within the new City of Toronto.

Health and Environmental Concerns:

The International Joint Commission, the Great Lakes Health Effects Program, Health Canada and Environment Canada have published original scientific research and data documenting the health effects of persistent organic pollutants (POPs) on peoples around the Great Lakes and other parts of Canada. Their research, and the re-evaluations of the toxicity of dioxins, furans and dioxin-like PCBs (collectively referred to as dioxins) by the World Health Organization (WHO) and the US EPA have led scientists to re-evaluate the total acceptable body burden of dioxins below which no effects are seen (the no-effects level or NOEL). In July 1998, the WHO concluded that the acceptable total daily intake (TDI) for human populations was in the range of 1-4pg/kg/bw/day.

The health and environmental concerns of PCBs are a result of their chemical properties. PCBs are very stable and slow to degrade in the environment, are fat-soluble and bioaccumulate and biomagnify in the fatty tissue of fish and mammals including humans. Canadians at most risk of high intake of PCBs are native people and others who regularly consume fish and wildlife in their diet. There are indications that high dietary intake of PCBs can have adverse effects on the development of the foetus and may increase the risk of cancer.

The major risk to Toronto residents from PCBs would be as a result of accidental exposure from spills or fires. Spills of liquid PCBs could occur due to poor storage, during transportation and poor handling practices during the remediation process. These are of concern primarily because of the long-term effects associated with the accumulation of PCBs in the environment. Fires involving PCBs are of greater concern than spills. The products of PCB combustion include dioxins and furans, which are very toxic and persistent. They can be released into the air where they can be inhaled and/or dispersed into the wider environment. Generally, a well-maintained and secure PCB waste storage site presents little risk to the public.

Concern over the long-term impacts of releases of PCBs to the environment has resulted in widespread banning of their use, and recently, agreement on a new international instrument that would ban PCBs from all uses and require remediation of all environmental reservoirs of PCBs and other POPs.

Canadian Obligations under International Agreements and Treaties:

In December 2000, agreement was reached by over 100 countries on a new international agreement that will "minimize with the aim of elimination" releases of an initial list of 12 POPs including PCBs, dioxins, furans and hexachlorobenzene. POPs are extremely toxic, are slow to degrade, and bioaccumulate in the environment and in the fatty tissue of fish and mammals including humans. Most POPs are either carcinogenic or recognized as cancer promoters and often cause sub-lethal effects including depressed immune systems, reproductive failures and learning deficits among exposed populations.

Canadians – especially those living in Canada’s far North and around the Great Lakes – have been shown to be especially susceptible to the effects of POPs because of a phenomenon known as global distillation, where POPs that are produced or generated in warmer countries migrate to colder climates, concentrating in the tissue of fish and mammals.

Because of this, Canada was a key participant in the negotiations for this new treaty. A Canadian chaired the negotiations through five intergovernmental negotiating sessions held between 1998 and 2000. The Canadian negotiating team included representatives from the Department of Foreign Affairs and International Trade, Environment Canada, Health Canada, Industry Canada, the Department of Indian and Northern Affairs, some provincial governments and Canadian International Development Agency. The Canadian negotiating team also included representatives from industry associations and environmental non-governmental organizations. Canadian observer groups – including the Inuit Circumpolar Conference and other indigenous, environmental, health and industry groups – also fully participated in the treaty process.

At the final negotiating session in Johannesburg in December 2000, representatives of 120 governments agreed to Treaty provisions that commits governments to treat and destroy stockpiles of POPs and to do so using methods and technologies that limit production of POPs by-products.

In May 2001, Canada signed the new POPs Convention – now known as the Stockholm Convention – and immediately became the first country to ratify the Convention, thus signalling Canada’s commitment to address, as a matter of urgency, releases of POPs and the subsequent contamination of Canadians. Although there are still some issues to be clarified at future technical working group meetings, it is expected that, once it comes into effect, the Convention will limit the available destruction options for PCBs and other POPs stockpiles to destruction and decontamination methods that will not produce by-product POPs including dioxins and furans during the destruction and/or remediation process.

Destruction Options in Canada:

Historically, there has been a lack of suitable facilities to destroy PCBs in Canada. This has led to the need for long-term storage of PCB wastes and PCB containing equipment. However, the development of new decontamination and destruction technologies provides opportunities to reduce PCB stocks in storage.

In the last ten years while there has been growing public concern about the effects of POPs there have also been growing fears that some of the traditional destruction methodologies could themselves be contributing to the POPs burden. As a result there has been some investment in developing decontamination and remediation technologies that result in both a very high destruction efficiency of hazardous waste but that limit the production of POPs by-products. Many of these technologies have now progressed from pilot scale testing to reliable, commercially available technologies. In some countries these new non-incineration technologies, some of which have been developed in Canada, are the preferred technique for the management, treatment and destruction of hazardous waste including PCBs.

Regulatory Authority:

In Canada, PCBs are regulated under the Canadian Environmental Protection Act (CEPA). There are four specific regulations under the act: Chlorobiphenyls Regulations; Federal Mobile PCB Treatment and Destruction Regulations; PCB Waste Export Regulations, 1996; and Storage of PCB Material Regulations. In June 2000, Environment Canada proposed revisions to the chlorobiphenyls and PCB storage regulations under CEPA. These amendments propose to prohibit all existing use of PCBs by 2007 and all PCB storage by 2009.

In addition to federal laws, there are provincial regulations under the Environmental Protection Act: Ontario Regulation 347 – Waste Management (General); Ontario Regulation 352 – Mobile PCB Destruction Facilities; and Ontario Regulation 362 – PCB Regulation. Facilities that destroy PCBs must obtain a Certificate of Approval (C of A) from the Ministry of the Environment before they can accept PCB wastes. A Certificate of Approval is also required before PCB decontamination takes place. The transportation of PCBs is also subject to the federal Transportation of Dangerous Goods Act and the Ontario Dangerous Goods Transportation Act.

A waste is considered a PCB waste if it contains 50ppm or more of PCBs. PCB related wastes are wastes containing low levels of PCBs or wastes arising from a spill or clean up of PCB liquid or waste. A waste is considered a high-level PCB waste if it contains 10,000ppm or more of PCBs.

(a) PCB Waste Transfers

The transfer of PCB wastes from one site to another is regulated, approved, and monitored by the provincial government. The applicant must demonstrate that the transfer will result in reduced risk to the environment through improved management, treatment or destruction of PCBs. Approval for a transfer is given by the Ontario Ministry of the Environment in the form of a Director's Instructions, which specify the conditions under which the waste can be transferred. Once it is issued, the Ministry of the Environment provides to the affected municipalities, a copy of the Director's Instructions. Although there is no legal requirement for municipal input, when a transfer occurs between municipalities, the Ministry of the Environment submits a copy of a PCB transfer application to the Clerk's office of the receiving municipality. It will consider written comments submitted on behalf of the municipality if these are received within one week of the notification. Otherwise, the Ministry assumes that the receiving municipality has no comments.

(b) PCB Decontamination

PCB decontamination is a process that can be used to greatly reduce the concentration of PCBs in low-level PCB liquids. All PCB destruction and decontamination processes are regulated, approved, and monitored by the Ministry of the Environment under Regulation 352 of the Ontario Environmental Protection Act. There are 3 classes of mobile PCB destruction facilities. Class 1 facilities include mobile thermo-chemical technologies and

processes, which are generally used to destroy high-level PCBs. Public hearings are required for a Class 1 facility and would include an evaluation of the technology as well as a site specific public hearing each time the equipment is set up at a waste disposal site.

Toronto's PCB waste and stockpiles would generally qualify for decontamination and destruction in Class 2 facilities. A Class 2 destruction facility is one that uses a chemical method to decontaminate materials containing PCBs, and the resultant material is recovered for re-use or disposal. Class 2 and 3 facilities are exempt from public hearing requirements.

(c) PCB Storage Sites

PCB waste storage sites are regulated, approved, and monitored by the Ministry of the Environment under Regulation 347 and 362 of the Environmental Protection Act. The Ministry of the Environment issues a Director's Instructions for each storage site, which sets out conditions such as a timetable for destruction. The Ministry has indicated its policy prevents approval of any new PCB storage sites in the City of Toronto. In May 1999, the Ontario Ministry of the Environment instructed all owners and operators of registered PCB storage sites, including those owned by the City, its agencies, boards and commissions, to provide a plan for the disposal of PCB wastes or to justify the need for continued storage. The Ministry of the Environment also maintains a computerised inventory of all provincially registered PCB waste storage sites with more than 50 litres of PCBs. This list is updated yearly and is available on CD-ROM. The federal government has responsibility for PCB wastes belonging to its agencies or federally chartered organisations, and maintains an inventory of such sites.

Existing Policies and Procedures:

The procedures varied in the former municipalities that form the new City of Toronto and these were described in the May 4, 1998 report to the Board of Health. Various departments, boards and committees were involved in decision-making and operational procedures (e.g. Board of Health, Buildings, City Clerk, Environment Committee, Fire, Public Health, or Works). There were also variations in inspection frequency and allowable practices. Some municipalities limited areas where hazardous substances could be stored and others did not allow transfers into their jurisdictions. For example, North York enacted By-law No. 32533 that, with the exception of specified sites, prohibits the storage of PCB wastes if the PCB is generated from lands other than the lands which form the storage site. As a result of this policy, some PCBs continue to be stored in sensitive sites.

Proposed Harmonised Policies and Procedures:

Consistent with international objectives, the ultimate goal of PCB management is the elimination and destruction of PCB stocks in the City of Toronto. City of Toronto policy should facilitate this reduction in PCBs while at the same time safeguard health and the environment. The proposed harmonised policies and procedures are guided by the recognition that the main risks to

the residents of the City of Toronto are due to accidental exposures related to a spill or fire involving PCBs, or disposal using inappropriate technologies.

(a) PCB Waste Transfers

The main aim of PCB transfers is to ease their management and decontamination or assure their destruction. The Ontario Ministry of the Environment will grant permission to transfer PCBs only if such transfers will improve the management of PCBs and thus reduce the risk to health and the environment. Under these circumstances, it is not considered necessary to generally prohibit the transfer of PCBs within the new City of Toronto.

PCB transfers can occur between two sites within the City of Toronto, from the City of Toronto to a site outside the City, in transit through the City, and as the result of transfers from outside the City. There are no approved facilities for high-level PCB destruction in Toronto. PCB transfers involve the transportation of hazardous materials in and through the City. The main risk is from a spill or fire caused by an accident, either during the handling or when on the road. The City of Toronto Emergency Plan as developed by the Emergency Planning Committee can address such mishaps. Works and Emergency Services, Emergency Planning Office and Toronto Fire Services have a lead role in emergency planning, preparedness and response in the City.

The Ontario Ministry of the Environment indicates that more than 200 transfers of PCBs out of the City of Toronto occurred in 1999. To facilitate emergency preparedness it would be most useful for the departments responsible for responding to emergencies to be notified of transfers before these occur. At present, the Ministry of the Environment provides a copy of the Director's Instructions for the transfers of PCBs to the City Clerk. The Ministry has also indicated that it is willing to send copies to other contact points within the City by fax or e-mail. The Ministry has already started to provide Fire Services with these copies. This information could also be used by Toronto Fire Services to maintain an up-to-date inventory of PCB storage sites in the City. During preparation of this report, City staff discussed the possibility of receiving notification of all application for transfers that occurred within, through or out of the City, before a Director's Instructions is issued. However, to ensure consistency across the province, it continues to be the policy of the Ministry to notify municipalities of transfers only when the receiving municipality is different from the municipality of origin.

(i) Transfers within the City

To the extent that transfers of PCBs within the City of Toronto will improve their management, there should not be a need to limit the transfer of PCBs from one site to another site within the City. For the purpose of emergency preparedness, Director's Instructions should be provided to Emergency Planning Office and Toronto Fire Services in advance of any transfers taking place.

(ii) Transfers out of the City

In most cases, transfers out of the City of Toronto will be for the purpose of destruction. For the purpose of emergency preparedness, Director's Instructions should be provided to Emergency Planning Office and Toronto Fire Services in advance of any transfers taking place.

(iii) Transfers through the City

On occasion, there may be a request for some PCB wastes to pass in transit through the City on their way to decontamination or destruction. PCBs in transit do not increase the amount of PCBs stored in the City in the long-term. When there are requests for transfers through the City, the City may wish to make sure that such transits present the best option available. For the purpose of emergency preparedness, Director's Instructions should be provided to Emergency Planning Office and Toronto Fire Services in advance of any transfers taking place.

(iv) Transfers into the City

The long-term goal of PCB management is the cessation of PCB use, reduction in amounts stored, and their ultimate destruction. As there are no approved destruction facilities for high-level PCB wastes within the City, transfers into the City cannot occur for this purpose. Additionally transfers into the City for long-term storage at existing sites is not considered desirable.

In cases when a request for transfer of PCBs appears as if it might present a risk to health or the environment, the Medical Officer of Health will advise Toronto Fire Services and, if necessary, request for additional time, and provide comments to the Ministry of the Environment for its consideration.

(b) Low level PCB Decontamination

PCB decontamination is a chemical process by which PCBs are broken down through dechlorination. These processes are not suitable for wastes containing high levels of PCBs (10,000 ppm or more), but are a way to reduce the total amount of low-level PCB wastes. Low-level PCB decontamination is considered to be of less risk than continued storage, and the technology for this purpose is now considered reliable. During the past ten years, low-level PCB wastes have been routinely decontaminated in Toronto. They typically involve mobile technology that remains at a given site for a short period of time.

For the purpose of emergency preparedness, Director's Instructions should be provided to Toronto Fire Services in advance. At present, the Ministry requests that applicants provide the City Clerk with a copy of their proposal. When a decontamination facility will operate for more than 7 days at one site, Regulation 352 provides for notice to be given of such proposals to the City Clerk and the Medical Officer of Health. The City Clerk can forward the notices for decontamination to Toronto Fire Services, the

Emergency Planning Office and Technical Services of Works and Emergency Services. In cases when such a request appears as if it might present a risk to health or the environment, the Medical Officer of Health will, if necessary, request more time to review the application, provide comments to the Ministry of the Environment for their consideration, and advise Toronto Fire Services. Any request for the use of incineration or for the destruction of high-level PCB wastes within the City will require review by the Medical Officer of Health in consultation with Works and Emergency Services. The Medical Officer of Health will report to the Board of Health on applications for destruction of high-level PCBs.

(c) PCB Storage Sites

Planning staff have recently conducted a cursory review of the zoning by-laws in effect in the City. Based on this review, except for the North York By-law 32533, zoning by-laws do not appear to address PCB storage sites specifically. A more thorough review is necessary before any changes to the by-laws are contemplated. City Planning has embarked on a process to prepare a new official plan to guide development in the City. Planning staff intend to present a new official plan to Council in 2001. At about the same time, Planning staff expect to start the process of harmonising zoning by-laws, including zoning provisions affecting PCB storage sites.

Well-maintained PCB storage sites are low risk to health and the environment. As part of the Canada-Ontario Agreement, the Ontario Ministry of the Environment is encouraging owners of PCBs, including the City of Toronto, to dispose of their stocks, and has requested that owners of PCBs provide the Ministry of the Environment with management plans to achieve this aim. This should greatly reduce the amount of PCBs stored in the City of Toronto.

(i) Site inspections

To ensure that PCBs continue to be stored securely, owners of PCB storage sites are required by the Ministry of the Environment to make monthly inspections of their facilities and to report annually. The Minister of the Environment has indicated that sensitive sites are inspected every year, major sites every two years and minor sites every four years. No data is available on the proportion of storage sites that could be considered a higher risk due to inadequate safeguards. Fire Services is developing a computer-aided dispatch system (CADS) which could contain information on the various storage sites, including quantities and specific location of any PCBs on the site. Fire Services will also discuss with the Ministry of the Environment the possibility of getting the results of the Ministry's inspections.

Additionally if during its regular surveillance activities, Toronto Fire Services identifies unrecorded PCB storage sites or problems, the Ministry of the Environment, the Medical Officer of Health and other city officials will be advised as necessary.

(ii) Sites with less than 50 litres of PCBs

The Board of Health requested an investigation of the feasibility of making an inventory of sites with less than 50 litres of PCBs. Fire Services has indicated it would be useful for them to have knowledge of such sites. Reporting of such small quantities is exempt from current provincial regulations. An accurate inventory of such sites would require a legal requirement to report, and resources for an associated awareness and compliance programme. Such sites are likely to be widely dispersed in the City and include ballasts from fluorescent lights and some small capacity electrical equipment built before 1977. Much of this waste may have previously found its way to the municipal landfill. The City currently has initiatives to divert hazardous wastes from municipal landfills. Small quantities of PCBs could form part of this collection program.

There is no easy way to compile an inventory of sites that contain less than 50 litres of PCBs since there is no legal requirement to report such volumes. Small volume PCB sites are ubiquitous across the city because of the large number of workplaces, institutions and even residences that use or have used PCB-containing fluorescent light fixtures.

(iii) Abandoned sites

At present, abandoned sites have been identified by a manual comparison between the provincial list of sites and properties with arrears in their municipal taxes. Only two abandoned sites have been identified in the former City of Toronto. A database that contains information from the Ontario Ministry of the Environment and municipal tax rolls could help streamline this process. However, given the small number of sites involved, a database for this purpose alone is not considered a high priority. Fire Services surveys its districts and identifies buildings that appear abandoned, have changed occupancy or otherwise may increase the risk of fire. If its surveillance activities identify potentially abandoned PCBs, Fire Services will notify the appropriate authorities.

PCBs Owned by the City:

The City of Toronto, including its agencies, boards and commissions, possesses PCBs and PCB waste as a result of owning and operating equipment that contains PCBs. The waste was generated when such equipment was taken out of service or acquired through property transactions. City owned PCBs and their storage are subject to Provincial regulations. All City departments, agencies, boards and commissions should provide Fire Services with an inventory of PCB storage sites that they are responsible for, including where possible, those containing less than 50 litres. Fire Services can make this information available to other city departments on request.

As per the direction of the Ministry of the Environment, the Facilities and Real Estate Division of Corporate Services is preparing a management plan for PCBs owned by the City. At the Toronto Inter-departmental Environment Committee meeting on March 23, 2000, it was

suggested that the City consider potential savings from the collaboration between City departments, agencies, boards and commissions. It was also noted that the public is concerned about Toronto exporting its waste and about toxic emissions, including dioxins, from the incineration of PCBs. It was therefore suggested that the City consider the feasibility of using non-incineration mobile technology for the destruction of its stored PCBs rather than sending PCBs outside Toronto for incineration.

Reliable high-level PCB decontamination and destruction has also been observed with the Gas Phased Chemical Reduction process. This process has been proven to destroy up to 100% PCB in transformer oil and capacitors and to tackle the decontamination process across a wide range of environmental media.

Conclusions:

The main concern with continued PCB storage is the potential contamination of the environment from a spill or toxic contaminants released during a fire. Non-incineration technologies exist that are capable of destroying and/or decontaminating both high and low-level PCBs in all environmental media that avoid the production of highly toxic dioxins, furans and regenerated PCBs. This should allow for a gradual elimination of PCBs in storage. Legislative authority for PCBs rests primarily with the federal and provincial governments.

As long as transfers of PCBs are part of an effort to reduce the amount of PCB wastes or to improve their management, these should be allowed to proceed. Requests to transfer PCBs to sites outside of Toronto are usually for transportation to a destruction facility. In such instances, it is to the benefit of the City to allow these transfers. Transfers into the City which form part of an effort to better manage PCB wastes and which do not consist of long-term storage should also be allowed. As part of emergency preparedness, Toronto Fire Services should receive notifications of all PCB transfers directly, before such transfers actually take place. Appendix 1 summarises the harmonised procedures for transfers.

PCB decontamination is considered to be of lower risk than storage of PCBs. Transfers of PCB for the purpose of decontamination as well as the process of decontamination itself should not be restricted in the City. For emergency preparedness, Toronto Fire Services should be notified of all proposed PCB decontamination in the City. Appendix 2 summarises the proposed harmonised procedures for decontamination. The Medical Officer of Health, in consultation with Works and Emergency Services, should assess any proposal for the incineration of PCBs or for the destruction of high-level PCBs within the City and provide comments to the Ontario Ministry of the Environment on the suitability and potential health risks of such technologies.

It is recommended that Toronto Fire Services include in its computer-aided dispatch system information on PCB storage sites. A regular inspection of PCB storage sites is a preventive measure that can encourage owners of facilities that store PCBs to maintain best practices. Fire Services surveys its districts and identifies buildings that appear abandoned, have changed occupancy or otherwise may increase the risk of fire. If its surveillance activities identify potentially abandoned PCBs, Fire Services will notify the appropriate authorities.

The City is also an owner of PCBs. The City is required by the Province to develop a plan for the safe destruction of these stocks. In developing this plan, the City should consider advantages of greater co-ordination among the various departments, agencies, boards and commissions and evaluate the various destruction options to destroy high-level PCB wastes, giving particular emphasis to the feasibility of using non-incineration mobile technology.

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Dr. Sheela V. Basrur
Medical Officer of Health

List of Attachments:

Appendix 1: Proposed Procedures for PCB Transfers
Appendix 2: Proposed Procedures for PCB Decontamination

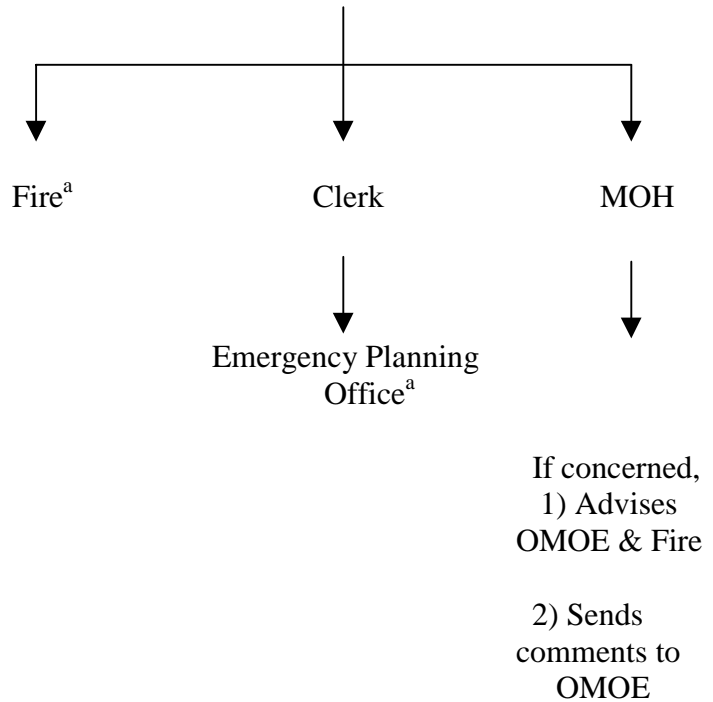
Appendix 1: Proposed Procedures for PCB Transfers
(A) APPLICATIONS FOR PCB TRANSFER

Within/Out of/Through
the City of Toronto

Into
the City of Toronto

1) OMOE does not notify
any Ontario municipality
of these applications

1) OMOE notifies City of application

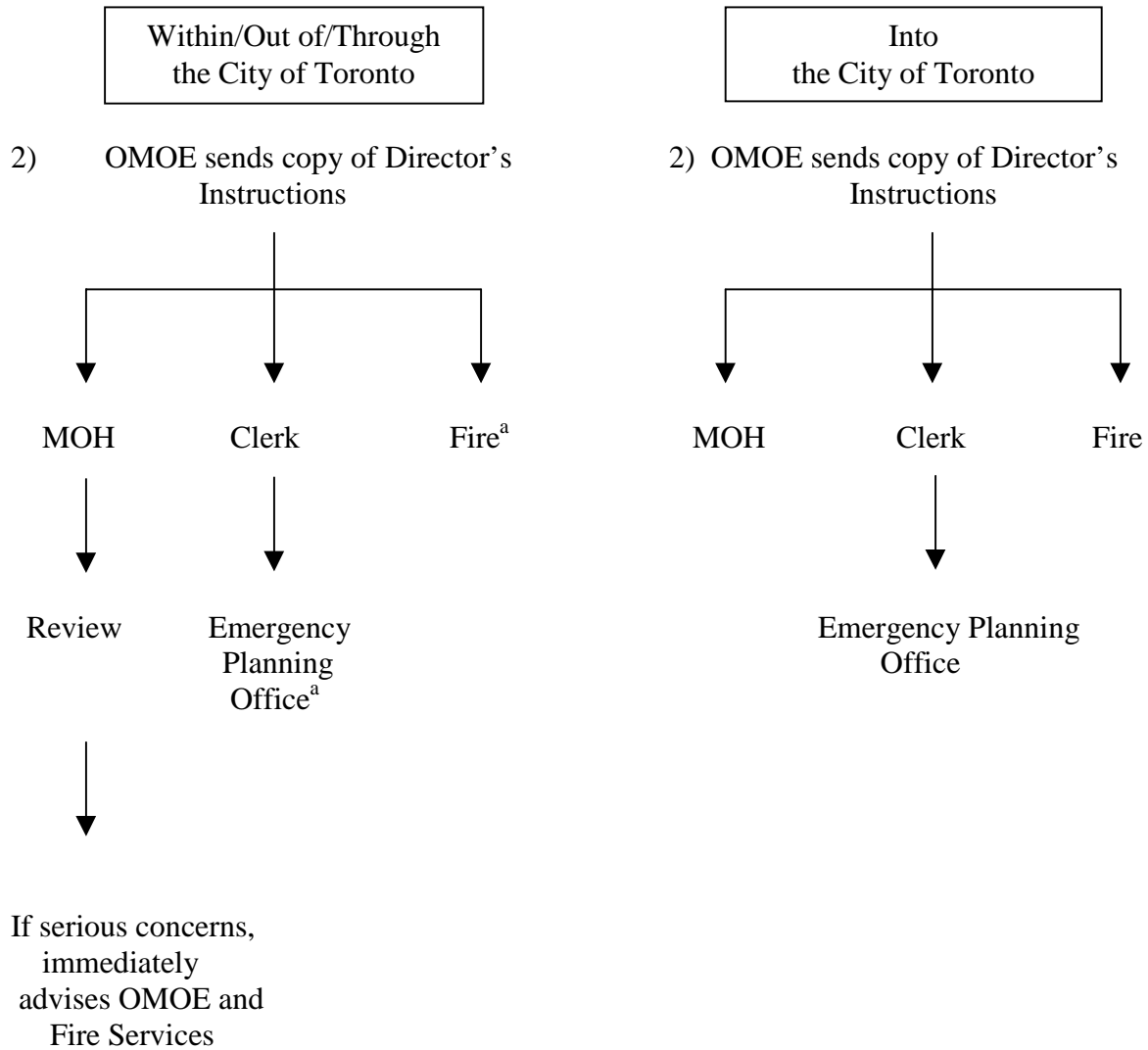


Notes:

^a Received for information

OMOE = Ontario Ministry of the Environment

Appendix 1: Proposed Procedures for PCB Transfers (Cont'd)
(B) NOTIFICATIONS OF MOE APPROVED TRANSFERS

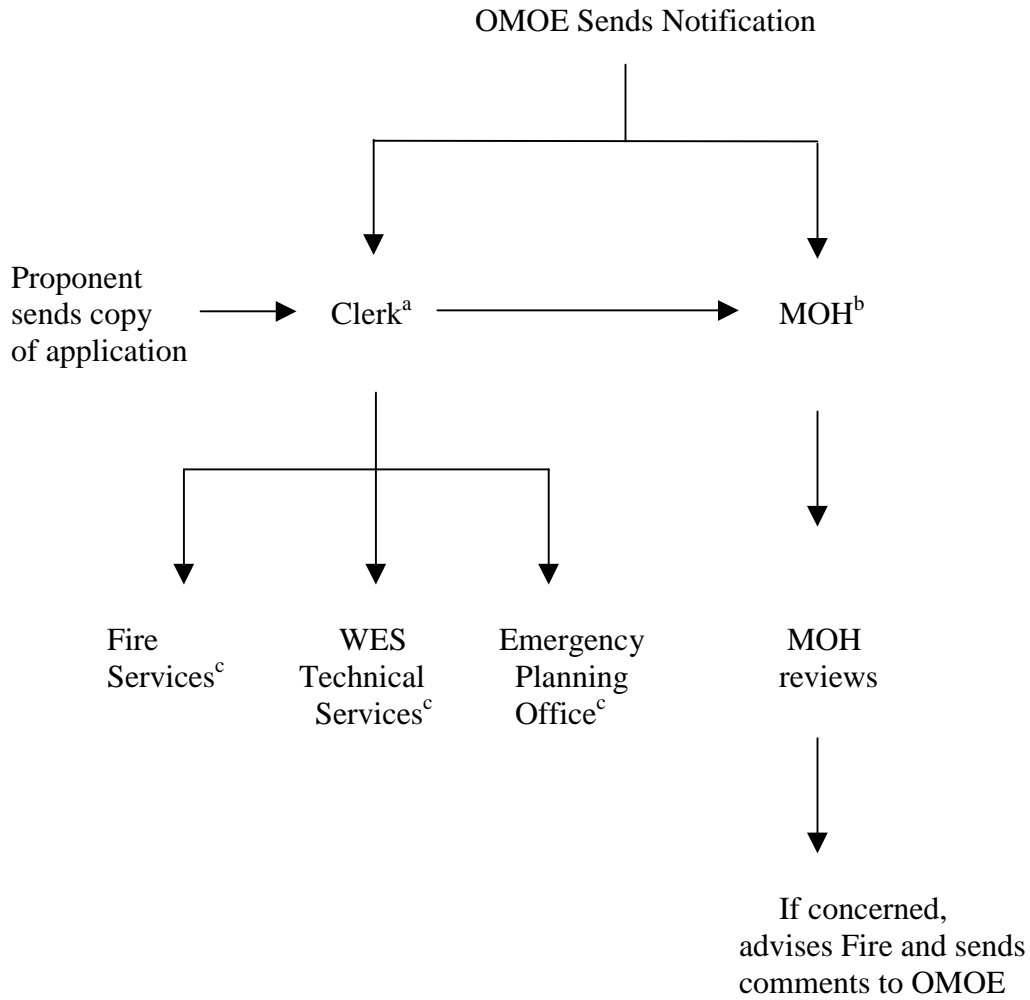


Notes:

^a Received for information

OMOE = Ontario Ministry of the Environment

Appendix 2: Proposed Procedures for PCB Decontamination



Notes:

^a The Clerk forwards the application as received from the applicant to the MOH and copies the other divisions for their information.

^b Under Regulation 352, the Ministry notifies both the Clerk and the Medical Officer of Health of Class 2 applications.

^c Received for information.

OMOE = Ontario Ministry of the Environment