PCB Implementation Task Force Final Evaluation Report:

NORTH AMERICAN REGIONAL ACTION PLAN ON PCBs

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PCB Implementation Task Force
in Conjunction with the
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EXECUTIVE SUMMARY

Considerable progress has been made on the North American Regional Action Plan (NARAP) for Polychlorinated Biphenyls (PCBs). The NARAP has served to focus government actions and has helped to achieve compatible requirements in several areas among the three countries. In particular, the experiences of Canada and the United States and the sharing of information on management controls and technologies have helped Mexico to develop regulations that address many of the NARAP action items.

Current legislation and regulations in the United States address the majority of NARAP action items related to national PCB standards and requirements. Canada's current regulations also address many NARAP action items and its new proposed PCB Regulations, expected in 2006, will implement the remaining action items related to PCB standards and requirements. Similarly, Mexico's adoption of NOM-133-SEMARNAT-2000, Environmental protection – Polychlorinated biphenyls (PCBs) – Handling specifications, published in the *Diario Oficial de la Federación* (DOF) on 10 December 2001, provides the environmental protection specifications for the handling of PCB-contaminated materials and wastes and those materials or wastes stored before the standard took effect, establishing a one-year deadline for elimination. The standard also states that all PCB inventories, including PCB-contaminated equipment from urban and rural facilities and sensitive sites (hospitals, schools, etc.), must be completely eliminated by 31 December 2008.

Regional solutions to issues such as compatibility in transboundary shipments and some aspects of treatment and disposal are no longer applicable since imports to the United States border are essentially prohibited by the Ninth Circuit Court Ruling of 7 July 1997. These action items have therefore been suspended pending any future developments.

Although many of the NARAP action items are complete or will be addressed in future regulations, regional cooperation continues to be of the utmost importance for issues such as managing the use of PCBs, waste reduction and recycling, treatment/disposal of PCBs, information/technology transfer, and capacity building. In reviewing the status of the NARAP action items, the Task Force identified a number of cooperative actions to be undertaken after the ending of the Task Force

- Continue to monitor the implementation and progress of the NARAP in all three countries using a periodic survey
- Compile and analyze the 1996 inventory information base and updated inventory information for the years 2002 and 2008 in all three countries
- Identify emerging issues and exchange updated information on technology to combat dispersive uses of PCBs, incidental generation of PCBs, PCB waste reduction and recycling, PCB treatment and disposal and PCB site remediation technologies
- Cooperate on any issues that may arise to facilitate elimination of PCB's
- Work towards the establishment of compatible environmentally sound management (ESM) practices for PCBs by taking into consideration the OECD guidelines on ESM with Core Performance Elements and, where possible, the Basel PCB Technical Guidelines when improving management practices and setting up targets and goals on the elimination of PCBs and PCB releases.
- Collaborate with the Environmental Monitoring and Assessment Implementation Task Force for their activities on monitoring and assessment of PCBs in the environment in North America.

ACRONYMS

CEC	=	Commission for Environmental Cooperation
CEPA	=	Canadian Environmental Protection Act
EPA	=	United States Environmental Protection Agency
INE	=	*Instituto Nacional de Ecología* (National Institute of Ecology)
NARAP	=	North American Regional Action Plan
OECD	=	Organization for Economic Cooperation and Development
PCBs	=	polychlorinated biphenyls
ppm	=	parts per million
Semarnat	=	*Secretaría de Medio Ambiente y Recursos Naturales* (Secretariat of the Environment and Natural Resources)
TSCA	=	Toxic Substances Control Act

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1 INTRODUCTION

1.1 Purpose

This report was developed by the North American PCB Implementation Task Force (ITF), an organization established under the Commission for Environmental Cooperation (CEC) consisting of representatives from environmental regulatory agencies of Canada, Mexico, and the United States. The primary purpose of the report is to provide a final update on recent events in each country that have bearing on the implementation of the PCB NARAP, to summarize the status of the NARAP action items at the conclusion of the PCB ITF's formal activities, and to indicate any future directions for work by the three countries on the NARAP subsequent to the close-out of the ITF.

1.2 Context

In support of the CEC's Sound Management of Chemicals project, the governments of Canada, the United States, and Mexico have committed to the development and implementation of North American Regional Action Plans (NARAPs) for selected persistent and toxic substances. A Working Group of representatives from Environment Canada, Mexico's Secretariat of the Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*—Semarnat),[1] and the United States Environmental Protection Agency (EPA) selected several chemicals of concern—DDT, chlordane, and mercury, as well as PCBs—for consideration. The Working Group then established the PCB Task Force to develop the PCB NARAP; other task forces are working on NARAPs for the other selected chemicals.

In 1996, the PCB Task Force used a thorough and deliberative process to develop the PCB NARAP. Two trilateral, consultative reviews were conducted to obtain public input on the goals and action items identified for PCB management in North America. The CEC and the Task Force gave careful consideration to all public comments and made several revisions to the draft NARAP based on public views. In December 1996, the final NARAP was completed, and in February 1997, the NARAP was approved by the ministers of the environment of the three countries.

The NARAP recognizes that sound environmental management of PCBs requires a consideration of PCBs throughout their life cycle from manufacture to destruction/disposal as well as a current, updated knowledge of PCB locations, amounts, and handling practices. The NARAP identifies three overarching goals:

- virtual elimination of PCBs in the environment;
- environmentally sound management of existing PCBs throughout their life cycle; and
- management of PCBs as one element of comprehensive environmental management programs.

In support of these goals, the NARAP addresses six primary strategies, with specific action items identified for each:

- establishing a PCB information base;

[1] The National Institute of Ecology (*Instituto Nacional de Ecología*—INE) is presently integrated into Semarnat.

- managing the use of PCBs;
- managing the storage of PCB wastes;
- assuring the proper treatment/disposal of PCB wastes;
- managing the transboundary shipment of PCB wastes; and
- promoting PCB waste reduction and recycling.

Since the completion and approval of the NARAP, all three countries have been working to implement many PCB strategies and associated action items. The PCB Implementation Task Force, with representatives from environmental regulatory agencies of Canada, Mexico, and the United States, has overseen this work.

2 STATUS OF NARAP ACTION ITEMS

Generally, much progress has been made on the NARAP. The NARAP has served to focus government actions and has helped to achieve compatible requirements in several areas among the three countries. In particular, the experiences of Canada and the United States and the sharing of information on management controls and technologies have helped Mexico to develop regulations that address many of the NARAP action items. A summary of the six PCB management strategies, status of actions, and next steps are summarized in the sections that follow. A matrix summarizing the status of each NARAP action item is contained in Annex A. An overview of each country's current and upcoming regulatory and legislative system for the management of PCBs is contained in Annex B.

It should be noted that since the endorsement of the NARAP in 1996, the need for regional solutions and compatible standards among the three countries to facilitate and share the capacity for PCB waste disposal (and hence, transboundary movement of PCB wastes) are no longer applicable, since PCB imports to the United States are currently prohibited. On July 7, 1997, the US border was closed by the Ninth Circuit Court Ruling respecting the import of PCBs (<2 ppm) unless EPA grants petitions on a case-by-case basis through rulemaking. Consequently, this situation has prevented regional sharing of PCB waste disposal capacity. Many of the action items meant to facilitate the transboundary movement of PCB waste have been rendered not applicable by the revised border status, and have therefore been left suspended pending any future developments. To compensate, other activities such as technology exchange have been enhanced.

2.1 Establishing a PCB Information Base

To characterize the scope of the PCB problem in the three countries and to monitor continued progress at reducing the risk of PCB wastes to human health and the environment, the NARAP calls on countries to develop a PCB information base and exchange information on an ongoing basis. This information base can serve as the basis for target-setting, transfer of technology, and ongoing tracking. The information has been developed by each country and made available to the public on request according to country-specific procedures and/or is made public through government publications. These country-specific information dissemination activities will be supplemented by the periodic assessment of the NARAP.

All countries established a 1996 information base, although the extent of information varies amongst countries. For all countries, there continue to be some gaps in information (e.g., capacitors in use) but these are being estimated or will be addressed by reporting requirements in future regulations. In 2002 Mexico underwent an internal process to ratify the data in the PCB inventory, since much of these data were overestimated. Today, both the PCB inventory and the national infrastructure for PCB treatment are posted on its web site. Countries will continue to exchange updated PCB information as available. To date, there has been no compilation, review, or analysis of this data by the Task Force.

2.2 Managing the Use of PCBs

In keeping with the goals of virtual elimination and environmentally sound management of PCBs, the NARAP calls on countries to cooperate and exchange information to promote greater consistency in their individual regulatory approaches on PCB use in the following areas:

- dispersive uses,
- non-dispersive uses,
- sensitive sites,
- reclassification,
- repair and reuse, and
- labeling.

The United States has regulations or programs in place that achieve these NARAP action items. Canada has many controls in place and together with its new PCB Regulations will implement all NARAP action items on the use of PCBs. Mexico was following the intent and objectives of this section in practice prior to the finalization of their regulations in 2001, which formally address all NARAP action items on the use of PCBs. Action item 2.11 to make protocols/standards compatible is no longer applicable due to the US border closure. There is a need to exchange technological information with Mexico regarding dispersive uses (action 2.1).

2.3 Managing the Storage of PCB Wastes

The NARAP calls on countries to ensure the environmentally sound management of storage facilities and to encourage the environmentally sound transfer of PCB wastes from storage to treatment or disposal.

The United States has regulations in place that address these action items. Canada has storage regulations in place and together with its new PCB Regulations, will address all action items. With the issuance of their regulations in 2002, Mexico formally regulates all NARAP action items on the storage of PCBs. Action item 3.2, to make storage requirements compatible, is no longer applicable due to the US border closure. However, this action may be carried on between Mexico and Canada should Mexico at some point wish to sent PCBs to Canada for destruction.

2.4 Assuring Proper Treatment/Disposal of PCB Wastes

The countries recognize the benefit in promoting greater consistency in their individual regulatory regimes to foster an overall coherent and adequate level of protection to human health and the environment in North America. The NARAP calls on countries to ensure that PCB wastes are treated and disposed of only at permitted/authorized facilities. It also looks to establish compatible, environmentally sound treatment/disposal requirements among the three countries through the development of a code of practice for the management of PCB wastes.

Countries continue to exchange information on their treatment/disposal facilities and controls. A technical workshop was held in March 2001 on PCB Treatment and Destruction to help Mexico in the development of domestic capacity. Actions 4.3 to 4.5 to develop a code of practice are no longer applicable due to the US border closure.

2.5 Managing Transboundary Shipment of PCB Wastes

The NARAP calls on countries to establish a more open but well-managed and controlled border policy among the three countries and remove barriers to transboundary shipments in order to increase the pace of treatment/disposal and provide for greater use of existing facilities.

The majority of action items in this section are no longer applicable due to the US border closure. Those actions that are still applicable, such as allowing for transit shipments and the return of stranded shipments have been implemented. Canada has regulations allowing transit shipments and the return of stranded shipments. In 1998, the United States modified its regulations to allow the transit of Mexican and Canadian PCB wastes. This regulation also allows the transit of United States waste through Canada and the return of shipments from Canada if required. Mexico regulates most of the actions with a focus on PCB exports due the January 2004 entry into force of the General Law for Waste Prevention and Comprehensive Management (*Ley General para la Prevención y Gestión Integral de los Residuos*— LGPGIR), which bans the import of waste consisting of persistent organic compounds, for which the work referenced in action 5.7 needs to be reinforced.

2.6 Promoting PCB Waste Reduction and Recycling

This section of the NARAP calls on countries to explore and enhance the use of environmentally sound reduction and recycling methods for PCB wastes.

All countries continue to exchange information on waste reduction and recycling practices. The United States enhanced its requirements for waste reduction and recycling in 1998 and others are under development. The planned regulations in Canada and Mexico will reference the action items for setting waste reduction and recycling protocols. Action 6.1, to consider waste reduction/recycling in a code of practice, is no longer applicable due to the US border closure.

2.7 Other Environmental Management Strategies

The NARAP calls on countries to exchange information and develop strategies for managing the incidental generation of PCBs and for remediation of PCBs in the environment.

Both Canada and the United States have implemented programs or controls to regulate the incidental generation of PCBs and manage remediation waste in an environmentally sound manner. Mexico's regulations address these action items. However, there is a need to exchange updated information on the incidental generation of PCBs with Mexico (action 7.1).

2.8 Emerging/Other Issues

2.8.1 Environmentally Sound Management of PCBs

The Task Force identified the need for a workshop on the Environmentally Sound Management of PCBs. Although many of the NARAP action items related to transboundary shipments and some aspects of treatment and disposal are no longer applicable because of the United States border closure, there continues to be a need for regional cooperation on issues such as managing the use of PCBs, PCB treatment/disposal, waste reduction and recycling, and information/technology transfer and capacity building.

Internationally, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal calls for the development and implementation of the Environmentally Sound Management of Hazardous Wastes, including PCBs. The objective is to ensure that the standards for treatment, destruction and disposal of hazardous wastes are consistent and compatible between countries (no pollution havens) and upgraded to higher standards of performance. Currently, there is inconsistency between Canada, Mexico and the United States, which could weaken its position in the international domain. These inconsistencies include:

- capacity to treat or destroy PCBs
- destruction, disposal, and recycling standards
- performance standards
- monitoring requirements (ambient and source)

North America has put itself in a leadership position in the world in dealing with a number of persistent organic pollutants (e.g., DDT) with the establishment of its Sound Management of Chemicals Program. In addition, with the signing of the POPs Treaty by the three NAFTA countries, it is important to continue to work cooperatively in earnest, particularly given that the environment and human health continue to be affected by these substances.

The Task Force therefore proposed to continue to advance the PCB file in a cooperative manner by holding a workshop on the Environmentally Sound Management of PCBs as a substitute for the development of a code of practice on treatment/disposal of PCB wastes and several other NARAP action items aimed at making standards and protocols compatible. Enhancing the consistency of standards in

North America would strengthen the position of the three countries in these international fora and enhance support for funding requests for capacity building where needed.

The workshop's objective was to examine environmentally sound management practices for PCBs and PCB wastes and ensure that standards for PCB management are consistent and compatible in the three countries.

The workshop discussions resulted in the agreement to work towards the establishment of compatible, environmentally sound management practices for PCBs in the three countries by taking into consideration the OECD guidelines on Environmentally Sound Management (ESM) with Core Performance Elements and, where possible, the new PCB Technical Guidelines under the Basel Convention when improving management practices and setting up targets and goals on the elimination of PCBs and PCB releases.

2.8.2 Contaminated Sites

Mexico has identified contaminated sites as a priority issue. Now that many of the actions directed at the use, storage, transport and disposal of PCBs are being addressed, Mexico is turning its attention to identifying contaminated sites and looking at options and technologies for remediation, including legislative amendments to address the topic of liability for pollution and site remediation. Mexico would benefit from the exchange of information on inventories of contaminated sites and remediation technologies.

2.8.3 Monitoring Requirements

The Task Force also identified monitoring of PCBs, both environmental verification and tracking of actions, as an important element of Environmentally Sound Management.

3 PATH FORWARD

The following sections summarize the recommended oversight actions on the PCB NARAP after the phase-out of the Task Force.

3.1 Implementation of the NARAP

In keeping with the SMOC "Phase Out of NARAP Task Forces" policy, the PCB Task Force proposes a process of periodic oversight and monitoring of the implementation of the NARAP. The Task Force proposes using a survey, similar to the matrix in Appendix A, and four-year periodic summary report by each country. The country focal point representative (to be identified) will compile the information and provide it to the CEC Secretariat. The Secretariat will analyze the information, report back to the SMOC Working Group and make the results publicly available.

3.2 Information Exchange

Although all countries established a 1996 inventory information base, the extent of information varies among countries and, to date, all the information has not been compiled or analyzed on a North American basis. The country focal points will compile the data from the 1996 inventory, update the 2002 and 2008 inventories and provide this information to the Secretariat by 31 December 2010, at the latest. The CEC Secretariat will use this information as a means of monitoring the progress of the PCB NARAP implementation. The 2008 inventory information reported by the three countries would also serve to confirm the completion of a key action item, the 2008 phase-out of use of high-level PCBs.

The Task Force also identified the following cooperative actions related to the exchange of information.

The Parties have agreed to:

- Exchange updated information on and transfer technology to combat dispersive uses (action 2.1)
- Exchange updated information on PCB treatment, disposal and PCB site remediation technologies (action 4.1)
- Exchange updated information on waste reduction and recycling practices (action 6.2)
- Exchange information on incidental generation of PCBs (action 7.1)

The Task Force proposes the following mechanism for exchange of the information listed above:

- All information exchange will occur via mail or electronic correspondence. The CEC Secretariat may provide reminders and some coordination to assist Parties in the furthering of this exchange. A workshop may be held biennially to promote information exchange and assess progress.

3.3 Emerging Issues

The Task Force identified the following cooperative action related to emerging issues:

- Work towards the establishment of compatible environmentally sound management practices for PCBs by taking into consideration the OECD guidelines on ESM with Core Performance Elements and the Basel PCB Technical Guidelines (where possible) when setting targets and goals on the elimination of PCBs and PCB releases;

The PCB Task Force proposes the following mechanism to address any emerging issues:

- Country Focal Points will work with the CEC's Hazardous Waste Task Force to address these issues. The CEC Secretariat will assist with coordination.

- The Secretariat will continue to monitor for any potential resources which could promote capacity building for PCB inventory reduction.

3.4 Monitoring

To ensure ongoing monitoring and assessment of PCBs in the environment, which is an important element of the NARAP, the PCB Task Force suggests that the Environmental Monitoring and Assessment Task Force should incorporate into their activities, the monitoring and assessment of PCBs in the environment in North America and report status and trends to the SMOC Working Group biennially.

The following monitoring and assessment areas should be considered:

1. Assessment of PCB levels and trends in the environment and in humans at risk in the United States, Canada and Mexico (Great Lakes, Arctic, St. Lawrence River, Pacific and Atlantic Coasts, and other areas).
    a) Report monitoring activities annually
    b) Assessment of monitoring data biennially

2. Expert support in the development and the implementation of a PCB monitoring program for Mexico with the financial support of the World Bank as this monitoring program would be an element of the proposed National Implement Plan for the Stockholm Convention for Mexico.
    a) Development and implementation of the monitoring program; identification of environmental indicators, areas and medias of concerns, monitoring period and frequency.

ANNEX A: MATRIX OF NARAP ACTION ITEMS

N/A = Rendered non-applicable at present time due to closure of the United States border to imports

#	Description (NARAP target date)	Canada	Mexico	U.S.
1	**ESTABLISH PCB INFORMATION BASE**			
1.1	Exchange info (ongoing from 1996)	Ongoing. Last done in 2001	Ongoing. Last done in 2001	Ongoing. Last done in 2001
1.2	Maintain info on location of treatment/storage/disposal facilities (ongoing)	Ongoing. Last done in 2001	Ongoing. Available on Internet	Ongoing. Available online
1.3	Establish 1996 information baseline (1998)	Completed. Data on in-use transformers will be addressed by new regulations	Ongoing. Available on Internet. Inventory periodically updated	Completed. Some data estimated.
	Exchange information annually relative to goals of NARAP (from 1999)	Ongoing	Ongoing	Ongoing
1.4	Liaise with other programs (ongoing)	Ongoing	Ongoing	Ongoing
2	**MANAGE THE USES OF PCBs**			
2.1	Transfer technology to combat dispersive uses (through 2000)	Completed. Last done in 2001	Mexico requires the parties' input on this issue.	Completed. Last done in 2001
2.2	Promulgate regs to eliminate dispersive uses (1997)	Completed in 1985.	Addressed in regulations	Completed
2.3	Eliminate dispersive uses (2000)	Completed in 1985	Addressed in regulations,	Completed in 1979/1988 regulations
2.4	Develop elimination strategy on non-dispersive uses(1998)	Completed in 1977	Addressed in regulations	Completed
2.5	Eliminate non-dispersive uses (2008)	Addressed in new regulations	Addressed in regulations	Voluntary phase-out initiatives
2.6	Control non-dispersive uses prior to elimination	Completed in 1977	Ongoing	Completed in 1979 regulations
2.7	Share technology and information on equipment in sensitive sites (1998)	Completed. Last done in 2001	Incomplete. Need to develop an inventory for sensitive sites	Completed. Last done in 2001
2.8	Develop rules for sensitive sites(1998)	Addressed in new regulations	Addressed in regulations. Need to develop an inventory for sensitive sites	Completed in 1985, 1988 regulations
2.9	Phase-out use at sensitive sites (2000)	Addressed in new regulations	Addressed in regulations	Completed in 1993
2.10	Exchange information on reclassification of PCB-containing equipment (1997)	Completed. Last done in 2001	Completed. Last done in 2001	Completed. Last done in 2001
2.11	Make protocols/standards compatible (1997)	N/A	N/A	N/A
2.12	Encourage reclassification of equipment during repair/reuse(ongoing)	Completed in 1995 CCME guidelines	Completed in NOM-133-SEMARNAT-2000	Completed in 1979 regulations, enhanced in 2001 amendments
2.13	Ensure trained personnel for equipment repair (ongoing)	Completed	Completed in NOM-133-SEMARNAT-2000	Completed
2.14	Establish rule requiring labeling of in-use equipment (1997)	Completed in 1991	Completed	Completed in 1978 regulations
3	**MANAGE THE STORAGE OF PCB WASTES**			
3.1	Establish storage regulations	Completed in 1992	Completed in NOM-133-	Completed in 1978 regulations,

#	Description (NARAP target date)	Canada	Mexico	U.S.
	(completed)		SEMARNAT-2000	1998 amendments
3.2	Make storage requirements compatible (1998)	N/A	N/A	N/A
3.3	Expedite transfer to treatment/disposal (1997)	Addressed in new regulations	Addressed in regulations	Completed in 1978 regulations
3.4	Establish storage time limits (1998)	Addressed in new regulations	Addressed in regulations	Completed in 1978 regulations, 1998 amendments
4	**ASSURE PROPER TREATMENT AND DISPOSAL OF PCB WASTES**			
4.1	Exchange information on treatment/disposal regs and approved technology (1996)	Completed	Completed	Completed
4.2	Develop code of practice (1997)	Workshops held in 1997, 2001, 2003 (exchange information on treatment and disposal regs and environmentally sound management practices)	Workshops held in 1997, 2001, 2003 (exchange information on treatment and disposal regs and environmentally sound management practices)	Workshops held in 1997, 2001, 2003 (exchange information on treatment and disposal regs and environmentally sound management practices)
4.3	Develop treatment/disposal code of practice (1998)	N/A	N/A	N/A
4.4	Implement the code of practice (after 1998)	N/A	N/A	N/A
4.5	Review code of practice periodically (after 1998, ongoing)	N/A	N/A	N/A
5	**MANAGE TRANSBOUNDARY SHIPMENTS OF PCB WASTES**			
5.1	Develop import/export rules (1997)	Completed	Completed	Completed
5.2	Exchange information on waste classifications (1996)	Completed. Last done in 1997	Completed	Completed. Last done in 1997
5.3	Make classifications compatible (1997)	N/A	N/A	N/A
5.4	Exchange information on sampling/analysis methods (1997)	N/A	N/A	N/A
	Exchange information on updates (ongoing)	N/A	N/A	N/A
5.5	Establish classification protocol or recognize others' requirements (1998)	N/A	N/A	N/A
5.6	Notify others of regulatory changes in safe transportation rules (ongoing)	N/A	N/A	N/A
5.7	Adopt OECD notification form (2000)	N/A	N/A	N/A
5.8	Make consent process/timeframes compatible (1998)	N/A	N/A	N/A
5.9	Streamline/automate consent process (1998)	N/A	N/A	N/A
5.10	Require OECD information on manifest (1998)	N/A	N/A	N/A
5.11	Streamline manifesting/tracking (1998)	N/A	N/A	N/A
5.12	Review liability insurance (1997)	N/A	N/A	N/A
5.13	Modify insurance coverage if needed (1998)	N/A	N/A	N/A

#	Description (NARAP target date)	Canada	Mexico	U.S.
5.14	Identify alternate destinations for transboundary shipments (ongoing)	Completed in 1992	Ongoing	N/A
5.15	Develop regulations allowing return of stranded shipments (1997)	Completed in 1992	Need to reinforce work on this issue	Ongoing. Current regulation (1998) to be supplemented by future Basel-implementing statutory change
5.16	Review transit shipment procedures (1996)	Completed in 1992	Ongoing, considered in LGPGIR	Completed in 1997
5.17	Establish rules to allow transit shipments (1997)	Completed in 1992	Need to reinforce work on this issue	Completed in 1998 regulation
5.18	Notify others of transit incidents (ongoing)	Ongoing	Ongoing	Ongoing
5.19	Identify border crossings in notices (ongoing)	N/A	N/A	N/A
5.20	Monitor treatment/disposal sites receiving foreign waste and notify others of any issues (ongoing)	N/A	N/A	N/A
5.21	Share information on compliance of treatment/disposal sites (ongoing)	N/A	N/A	N/A
5.22	Ensure conformity with code of practice in 4.3 (1999)	N/A	N/A	N/A
6	**WASTE REDUCTION AND RECYCLING**			
6.1	Consider in code of practice (1997)	N/A	N/A	N/A
6.2	Exchange information on practices (ongoing)	Ongoing. Last done in 2001	Ongoing. Last done in 2001	Ongoing. Last done in 2001
6.3	Develop regulations/protocols (1998)	Addressed in new regulations	Addressed in regulations	Ongoing. Requirements enhanced in 1998 amendments, others under development
7	**OTHER STRATEGIES**			
7.1	Exchange information on incidental generation of PCBs (ongoing)	Ongoing. Last done in 2000	Need to exchange information with Canada and United States on this issue	Ongoing. Last done with Canada in 1999/2000
7.2	Regulate incidental processes (ongoing)	Completed in 1991	Addressed in regulations	Completed in 1984
7.3	Manage remediation waste in an environmentally sound manner (ongoing)	Ongoing since 1989 with CCME Guidelines	Addressed in regulations and PCB treatment authorizations	Ongoing since 1978 via TSCA, RCRA and Superfund & other laws

ANNEX B: COUNTRY-SPECIFIC UPDATES

With respect to NARAP implementation activities, the following sections provide an overview of the current and upcoming regulatory and legislative system for the management of PCBs. These overviews focus primarily on recent updates, changes, or activities related to each country's PCB regulatory structure. More complete descriptions of the three countries' PCB regulatory frameworks can be found in the CEC's 1996 report, Status of PCB Management in North America, and the December 1996 PCB Regional Action Plan (available from the CEC or online at <www.cec.org>).

Canada

In Canada, PCBs are regulated under a series of regulations promulgated under the Canadian Environmental Protection Act, 1999 (CEPA 1999). The Chlorobiphenyl Regulations, first issued in 1977, set a regulatory concentration limit of 50 parts per million (ppm). They prohibit the manufacture, process, use (except for specified equipment), sale and import of PCBs for any use (except the importation of PCBs for destruction), restrict the content of PCBs in products, and restrict the amount of PCBs that can be released to the environment. PCBs are also regulated under CEPA's Export and Import of Hazardous Waste Regulations, Storage of PCB Material Regulations, PCB Waste Export Regulations, and Federal Mobile PCB Treatment and Destruction Regulations. Copies of these regulations are available online: <www.ec.gc.ca/CEPARegistry/regulations/>.

Canada's progress toward achieving some of the goals in the NARAP is described below.

Establishing a PCB information base

Canada has information on PCBs in use, in storage, shipments, wastes treated/disposed, and waste treatment/disposal facilities from either their federal or provincial authorities. Information on PCBs in use is currently limited; however, Canada will establish mandatory reporting for PCBs in use through revisions to the Chlorobiphenyls Regulations. Regulatory reporting on storage and voluntary reporting on use is currently being compiled into a national inventory database. Annual reports of the National Inventory of PCBs in use and PCB wastes in storage in Canada are available on Environment Canada's web site <www.ec.gc.ca/pcb>.

Managing the use of PCBs

Canada has developed information packages on how to identify equipment containing PCBs, analytical reference methods for PCBs, guidance documents on the environmentally sound management of PCBs and PCB wastes (including inspections, spill prevention and cleanup) and guidelines on decontamination of PCB transformers.

Canada currently has regulations addressing both dispersive and non-dispersive uses of PCBs (Chlorobiphenyls Regulations). Canada's existing regulations prohibit the use of PCB-contaminated oils for road oiling and also the use of PCBs in equipment and products except for specific PCB equipment already in use. The regulations prohibit the use of PCB equipment at some sensitive sites, such as food/feed processing plants.

Environment Canada has initiated consultations on revisions to the Chlorobiphenyls Regulations and to the Storage of PCB Material Regulations. The new proposed PCB Regulations will replace these two existing regulations and, while incorporating most of the existing requirements, will add new provisions for the tracking and accelerated disposal of PCB contaminated equipment currently in service, and additional restrictions on the uses, namely:

- phase out PCB equipment with PCB concentrations of 50 ppm or more by specific time deadlines
- set a maximum content of 2 ppm of PCBs in manufactured and imported products
- obligatory labeling and reporting of PCB equipment in use.

These proposed revisions will consider the goals of the NARAP, including striving to achieve the full elimination of non-dispersive uses of PCBs in high concentrations (e.g., transformers, capacitors) by 2008. These revisions will also be in line with Canada's commitments under the UN ECE LRTAP Convention Protocol on POPs and the UNEP Stockholm Convention on POPs to make determined efforts to eliminate the use of PCBs in equipment and destroy PCB wastes in a timely manner. The revised PCB Regulations are expected to be published in 2006.

Managing the storage of PCB wastes

Canada has federal and provincial regulatory requirements for all PCB storage facilities which address safety, pollution prevention, and tracking of waste destruction. The federal Storage of PCB Material Regulations are being revised to implement another goal of the NARAP—the setting of a time limit on storage before destruction. The proposed revisions will include a maximum storage limit of one year, a time limit for the destruction of PCB wastes already in storage and a prohibition on the storage of PCB material in sensitive locations. These revisions will implement commitments under the UN ECE LRTAP Convention Protocol on POPs and the UNEP Stockholm Convention on POPs.

Assuring proper treatment/disposal of PCB wastes

Canada has provincial and federal regulatory requirements and approval procedures for the operation of treatment and disposal facilities which ensure an efficient destruction of PCBs. National guidelines on treatment/disposal of PCB wastes have been developed and are considered by provinces when developing their regulatory controls. Revisions to the Federal Mobile PCB Treatment and Destruction Regulations will set more stringent emission limits for treatment and destruction facilities. They are expected to be published in 2006.

Managing transboundary shipment of PCB wastes

Many of the action items meant to facilitate the transboundary movement of PCB waste have been mooted by the United States border closure and have therefore been left uncompleted pending any future developments.

Canada promulgated new PCB Waste Export Regulations in 1997. These rules allow export only to the United States and only for disposal at EPA approved and regulated facilities (excluding landfills). Exports

to other countries have been banned since 1990. Canada's PCB import controls, under the Chlorobiphenyls Regulations and Export and Import of Hazardous Waste Regulations, have been in place since 1977 and 1992, respectively, and only allow import of PCBs for disposal. The notification of any shipments must be approved by the receiving provincial authority. Provincial governments authorize specific destruction procedures for PCB equipment within the province.

Promoting PCB waste reduction and recycling

Canada currently promotes PCB waste reduction and recycling. Provincial governments authorize specific decontamination procedures and set decontamination limits for PCB equipment, contaminated soils, liquids and solids within the province.

Other Developments

Canada led the development of two of the five technical guidelines on POP wastes currently being developed under the Basel Convention, *General technical guidelines on the environmentally sound management of wastes consisting of, containing or contaminated with persistent organic pollutants* and *Technical guidelines on the environmentally sound management of wastes consisting of, containing or contaminated with polychlorinated biphenyls, polychlorinated terphenyls and polybromated biphenyls*. These new Basel Guidelines "determine … methods that constitute environmentally sound disposal" for PCBs, as per Article 6.2(b) of the Stockholm Convention.

Mexico

Historically, Mexico has used smaller quantities of PCBs compared to Canada and the United States, although it has yet to establish a specific regulatory structure for their control. Until 2003, PCBs were expressly regulated as hazardous wastes under the Hazardous Waste Regulation of the General Law of Ecological Equilibrium and Environmental Protection and technical standards such as NOM 052-SEMARNAT-1993.

In December 2001, Mexico adopted NOM-133-SEMARNAT-2000, Environmental protection – Polychlorinated biphenyls (PCBs) – Handling specifications, providing the environmental protection specifications for the handling of PCB-contaminated materials and wastes and those materials or wastes stored before the standard took effect, establishing a one-year deadline for elimination. The standard also states that all PCB inventories, including PCB-contaminated equipment from urban and rural facilities and sensitive sites (hospitals, schools, etc.), must be completely eliminated by 31 December 2008. In the case of transboundary PCB movements, Mexico has focused on exports, adhering to current rules under its international treaties. PCB imports are currently banned by Mexico.

As from 2004, the LGPGIR provides that PCBs are subject to hazardous waste management plans.

Drawing extensively on its understanding of the Canadian and United States regulatory regimes, Mexico has attempted to make its regulations as compatible with the NARAP as possible.

Mexico's progress toward achieving the goals in the NARAP is described below.

Establishing a PCB information base

Mexico has information on PCBs in use, storage, shipment, treated or decontaminated waste and treatment and disposal facilities. The information is coordinated by Mexican federal authorities. Much of the information is provided by PCB holders in compliance with the obligations set forth in NOM 133-SEMARNAT-2000, which requires PCB holders to submit the inventory of their stored and operating equipment and any PCB-contaminated waste they hold, as well as their elimination schedule in line with the established timetables. PCB holders are also required to submit an annual report to the authorities (discarded, treated or dismantled materials) and the PCB volumes disposed of during the year. The Semarnat web site <www.semarnat.gob.mx> provides the partial national PCB inventory for PCB usage and waste, as well as a listing of authorized PCB treatment and destruction facilities.

Managing the use of PCBs

NOM 133-SEMARNAT-2000 establishes requirements for the handling, registration, inspection and notification of all holders of materials and wastes having PCB concentrations exceeding 50 ppm. The standard defines sensitive sites (i.e., facilities where the presence of PCBs could pose a high risk to humans) and requires that all PCB-contaminated equipment be withdrawn from service at sensitive sites by December 31, 2008.

NOM 133-SEMARNAT-2000 establishes specifications for the following considerations, among others:

- PCB identification and management for owners or holders thereof;
- management obligations of holders or treatment facilities;
- restrictions on PCB use;
- classification methods;
- labeling and marking;
- PCB storage and transport;
- PCB reclassification, elimination and conditioning, decontamination, recycling, disposal and export; and
- responsibility for compliance.

The standard establishes a two-year period from its effective date for the review of the elimination deadlines for PCB materials and wastes. Although said review was not done, Mexican law provides that standards are revised every five years; thus, the first revision of NOM 133-SEMARNAT-2000. However, it is possible that the standard will be revised earlier than scheduled due to the development of the implementation plan for the UNEP Stockholm Convention on POPs.

Managing the storage of PCB wastes

As noted above, NOM 133-SEMARNAT-2000, adopted by Mexico, expands upon the existing hazardous waste storage requirements that currently apply to PCB materials. Under the regulations, PCB wastes and equipment removed from service may only be stored in duly listed areas, to be disposed of in a period not to exceed nine months, once removed from service. PCB liquids and hazardous wastes, other than

equipment, must be stored in closed, appropriately labeled containers. PCB waste storage facilities must develop accident prevention and special safety equipment plans for leaks or accidents involving PCBs, conduct inspections, maintain records, and comply with site and facility design criteria. It should be noted that the landfill confinement of any material or waste containing POPs such as PCBs is banned by Mexican law.

Assuring proper treatment/disposal of PCB wastes

Through Semarnat, Mexico has developed forms to request authorization to install and operate treatment systems (decontamination, physicochemical treatment and thermochemical) and to export PCB materials and wastes, including the documents, requirements, specific studies and protocols needed to obtain such authorizations. The requirements also govern air releases and water concentrations of the wastes produced in the aforesaid treatment systems. Mexico has further adopted decontamination limits for liquids and metallic surfaces before reuse, maximum allowable PCB emission levels for air, water, soil and solids, and the semiannual PCB reporting by all treatment or disposal facilities.

Managing transboundary shipment of PCB wastes

Many of the action items meant to facilitate the transboundary movement of PCB waste have been mooted by the United States border closure and have therefore been left uncompleted pending any future developments.

Imports of PCBs to Mexico are currently prohibited; however, PCBs may be exported for treatment or incineration, but not for landfill disposal. Since the 1990s, Mexico has exported PCBs to Finland, France, Spain, and the Netherlands. Mexico adopted the OECD shipping form for transboundary movements, and currently ships PCBs to OECD member countries or the European Community. PCB exporters must hold a bond against potential third-party or environmental damages that may occur during shipment. The OECD shipping form also imposes specific requirements on storage in containers. To date, Mexico has not acted as a PCB transit country. The PCB export authorization requires the consent of the PCB receiving country and a specification of the shipping route, among other requirements. Carriers must ensure the safe handling of materials during shipment, keeping the shipping documentation, emergency transportation information, and delivery-transport-receipt manifests.

Promoting PCB waste reduction and recycling

NOM 133-SEMARNAT-2000 provides for the authorization of decontamination systems to eliminate PCBs from materials, so that the liquids or metals decontaminated to below 50 ppm of PCBs may be reused or recycled.

Other Developments

Contaminated sites are a priority issue for Mexico. Now that many of the actions directed at the use, storage, transport and disposal of PCBs are being addressed, Mexico has turned its attention to identifying contaminated sites and looking at options and technologies for site remediation.

United States

The United States has devised a comprehensive regulatory structure for the control and disposal of PCBs. PCB use is primarily regulated at the federal level, with states retaining some secondary responsibility. The federal Toxic Substances Control Act (TSCA) has a section devoted exclusively to PCBs, and PCB regulations comprise more than seventy pages in the Code of Federal Regulations. Under this regulatory regime, the manufacture, import, export, and use of PCBs are banned, except under limited circumstances. In 1998, EPA promulgated significant new regulations governing the use and disposal of PCB (63 FR 35384). These rules allow a broader range of disposal options with the aim of encouraging the accelerated removal of PCBs from the environment. EPA continues working on other regulatory and non-regulatory efforts to control and eliminate PCBs, including the phase-out of high-concentration liquid uses of PCBs.

The United States' progress toward achieving the goals in the NARAP is described below, by NARAP strategy area.

Establishing a PCB information base

The EPA maintains data on PCB waste shipments, wastes treated and disposed, and PCB waste treatment/disposal facilities. Information on the exact amounts of PCBs in use and in storage is currently somewhat limited. For the purpose of information exchange, the United States therefore relies upon estimates of some of these quantities. Disposal data from 1990 through 1999 are currently available on the EPA web site <www.epa.gov/pcb>.

In 1998, EPA required owners of all PCB transformers (500 ppm and above) to register those units with EPA. This information has been compiled and is available to the public online <www.epa.gov/pcb>. This registration requirement does not extend to other PCB equipment such as capacitors.

Managing the use of PCBs

Regulations prohibit dispersive uses of materials containing 2 ppm or more PCBs. The United States has successfully implemented programs (both regulatory and non-regulatory) aimed at eliminating non-dispersive uses, and is sharing information on these programs with Canada and Mexico. The United States currently has regulations addressing the use of PCBs at sensitive sites (all public and commercial buildings), including a complete ban of PCBs in the vicinity of food or animal feed.

In April 2001, EPA revised its regulation of the reclassification of electrical equipment, simplifying the procedures for removing PCBs from electrical equipment and deregulating that equipment. EPA believes these simplified procedures will encourage owners to perform more reclassifications, thereby accelerating the phase-out of PCBs from use.

EPA's voluntary phase-out initiative is continuing and has grown from the EPA Region 5 pilot program to a national activity with programs in Regions 5, 8, 9 and 10. EPA's Office of Pollution Prevention and Toxics is completing further scoping and development work for a comprehensive national phase-out

effort in support of EPA's commitment to the elimination of PCB transformers and large capacitors in the United States.

Managing the storage of PCB wastes

In the United States, all storage facilities are subject to requirements, ranging from rigorous safety standards for on-site storage to more detailed requirements (e.g., closure plans, closure cost estimates, financial assurance for closure, background checks of key or principal employees) for commercial storage. PCB waste is tracked from generation to disposal by a manifest system, and it must be disposed of within one year from removal from service. Additional modifications to the system currently in place are not anticipated.

Assuring proper treatment/disposal of PCB wastes

Since 1978, EPA has regulated the disposal of PCB wastes at concentrations of 50 ppm or greater. Disposal facilities must be permitted by EPA and consist of incinerators, landfills and alternative technologies that demonstrate an efficiency, equivalent to incineration, at destroying or removing PCBs. Periodically, the regulations are revised to accommodate changes in disposal methodologies, most recently in 1998. A primary objective of the 1998 disposal rule is was to increase the pace of PCB removal and destruction or disposal in the United States.

Managing transboundary shipment of PCB wastes

In 1997, EPA's regulation allowing the import of PCB waste for disposal was overturned by a Court ruling. Consequently, the United States border is closed to the import of PCBs (>2 ppm) unless EPA grants petitions on a case-by-case basis through rulemaking. This situation has prevented implementation of the NARAP principle of regional sharing of PCB waste disposal capacity. Many of the action items meant to facilitate the transboundary movement of PCB waste have been mooted by the current border status, and have therefore been left uncompleted pending any future developments.

Particular actions in the NARAP that are still applicable have been completed by the United States. In 1998, EPA modified its regulations to allow the transit of Mexican PCB waste to Canada (and vice-versa if required). EPA also passed a regulation to allow the transit of United States waste through Canada. This regulation also allows the return of United States waste shipments containing PCBs from Canada, if required.

Promoting PCB waste reduction and recycling

EPA has regulations and protocols in place which address the reduction of PCB waste and the decontamination and recovery of valuable materials contaminated with PCBs. These regulations were enhanced by the 1998 disposal rule, in which EPA authorizes specified decontamination procedures for the removal of PCBs from materials prior to use, re-use, or disposal without prior Agency approval.

ANNEX C: LIST OF PCB LEGISLATION, REGULATIONS AND GUIDELINES

Canada

Current regulations <www.ec.gc.ca/CEPARegistry/regulations>:

- Chlorobiphenyls Regulations
- Export and Import of Hazardous Waste Regulations
- Storage of PCB Material Regulations
- PCB Waste Export Regulations
- Federal Mobile PCB Treatment and Destruction Regulations.

Draft Revisions to Regulations <www.ec.gc.ca/pcb/eng/new_e.htm>:

- Draft revisions to the Chlorobiphenyls Regulations, the Storage of PCB Material Regulations and the Federal Mobile PCB Treatment and Destruction Regulations (2005)

Current Guidelines of the Canadian Council of Ministers of the Environment (can be ordered from <www.ccme.ca/4e_publications/4e.html>)

- PCB Transformer Decontamination: Standards and Protocols
- Guidelines for Mobile Polychlorinated Biphenyl Destruction Systems
- Guidelines for Mobile Polychlorinated Biphenyl Treatment Systems
- Guidelines for the Management of Wastes Containing Polychlorinated Biphenyls (PCBs)

Mexico

Current Laws and Regulations <www.semarnat.gob.mx>:

- General Law for Waste Prevention and Comprehensive Management.
- Mexican Official Standard NOM-133-SEMARNAT-2000, Environmental protection – Polychlorinated biphenyls (PCBs) – Handling specifications.
- Mexican Official Standard NOM-052-SEMARNAT-1993, Establishing the characteristics of hazardous waste, the listing thereof, and the limits making a waste hazardous by reason of its environmental toxicity.
- Guidelines for proper PCB handling, management, and treatment/disposal (NOM-133-ECOL-2000)
- Hazardous Waste Regulations (NOM-052-ECOL-1994)

United States

Current Regulations <http://www.epa.gov/pcb/#EPA%20PCB%20Regulations>

- 2001 40 CFR 761- Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce and Use Prohibition

OECD

Current guidelines on Environmental Sound Management are available at <http://www.oecd.org/document/7/0,2340,en_2649_34399_2674951_1_1_1_1,00.html>.

Basel

Current Technical guidelines on PCBs are available at <http://www.basel.int/techmatters/index.html>.