



International POPs Elimination Project

*Fostering Active and Efficient Civil Society Participation in
Preparation for Implementation of the Stockholm Convention*

PCBs Pollution of Nizhegorodskaya Oblast: Territory Monitoring and Inventories of PCBs Sources as an Option to Address the Problem

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About the International POPs Elimination Project

On May 1, 2004, the International POPs Elimination Network (IPEN <http://www.ipen.org>) began a global NGO project called the International POPs Elimination Project (IPEP) in partnership with the United Nations Industrial Development Organization (UNIDO) and the United Nations Environment Program (UNEP). The Global Environment Facility (GEF) provided core funding for the project.

IPEP has three principal objectives:

- Encourage and enable NGOs in 40 developing and transitional countries to engage in activities that provide concrete and immediate contributions to country efforts in preparing for the implementation of the Stockholm Convention;
- Enhance the skills and knowledge of NGOs to help build their capacity as effective stakeholders in the Convention implementation process;
- Help establish regional and national NGO coordination and capacity in all regions of the world in support of longer term efforts to achieve chemical safety.

IPEP will support preparation of reports on country situation, hotspots, policy briefs, and regional activities. Three principal types of activities will be supported by IPEP: participation in the National Implementation Plan, training and awareness workshops, and public information and awareness campaigns.

For more information, please see <http://www.ipen.org>

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Nizhegorodskaya Oblast belongs to one of the most industrialised and densely populated regions of Russia. Numerous industrial facilities operate in the oblast including engineering and metal processing plants, a fuel and energy industrial complex, and chemical and petrochemical industries. All of them use PCBs-filled electric equipment items (e.g. capacitors and transformers). In Dzerzhinsk, for more than 50 years, the largest PCBs-production plant of the former USSR operated (it produced PCBs of Sovol and Sovtol brands and also hexachlorobenzene (HCB)). Overall, the plant produced 145,000 tons of PCBs.

The Problem

The Stockholm Convention stipulates the need to implement urgent actions in order to address the problem of certain pollutants, particularly PCBs. The following PCBs-related objectives are defined:

- *Immediate cancellation of production of new PCBs,*
- *Cancellation of use of PCBs-containing equipment by 2025 or its further use, subject to specific terms and restrictions,*
- *Expeditious introduction of environmentally sound management of PCBs waste, not later than by 2028.*

Unfortunately, there are no legislative acts in Nizhegorodskaya Oblast on the problem of POPs in general and PCBs in particular. Some environmental bodies have no information on PCBs wastes and PCBs-containing equipment items at industrial facilities of the region.

In 1992 - 2005, some scattered studies were conducted in Nizhegorodskaya Oblast to measure POPs levels. These studies were limited to the territory of Dzerzhinsk. In general, residents of the region are currently poorly aware of potential risks posed by industrial facilities that operate PCBs-containing equipment and incinerate their industrial waste on-site.

Project objectives

- To identify PCBs contamination levels in environmental media in the region;
- To reduce adverse health and environmental impacts of PCBs;
- To inform local residents, authorities, and managers of industrial facilities on the sources of POPs (PCBs) in the territory of the region;
- To enhance the roles of the public in addressing problems of identification, storage, elimination of PCBs stockpiles and mitigation of their adverse health and environmental impacts.

Project results

In the course of the project implementation, a working group was established. The group included representatives of the academic community, environmentalists, and representatives of federal/regional governmental environmental bodies. The working group held several roundtables and meetings and information materials were developed and published.

Water and soil samples were taken in seven cities of Nizhegorodskaya Oblast where PCBs sources are located (facilities that operate PCBs-containing electric equipment, industrial waste incinerators and municipal landfills). PCB monitoring in environmental media was maintained by employees of Municipal Facility "Regional Environmental Monitoring Centre", who have substantial experience in such

measurements, along with the involvement of members of Eco-SPES NGO who have experience in participating in POPs monitoring projects. These research studies confirmed PCBs contamination of territories near Dzerzhinsk. Despite termination of production of PCBs by "Orgsteklo" Co., pollution of the area by PCBs continues. For example, PCBs levels in the water pond near the municipal landfill of Nizhniy Novgorod and Dzerzhinsk and in bottom sediments of Volosyanikha channel grossly exceed applicable maximal acceptable concentrations.

For the first time in the Russian Federation in the course of the project implementation a public inventory of PCBs-containing electric equipment items was conducted. We encountered some difficulties as some facilities refused to provide information on the presence of such equipment. In some cases, Eco-SPES NGO filled complaints to the Office of the Environmental Prosecutor of Nizhegorodskaya Oblast on non-compliance of facility managers with the Law on Environmental Protection and the Law on Information.

The inventory work allowed collection of information on the presence of PCBs-containing liquids and on reduction of equipment stocks at the majority of facilities of Nizhegorodskaya Oblast in 1999 - 2005. According to our surveys, facilities of the region reported that now they have much less PCBs-containing equipment (reduction by about 92%, compared to the results of AMAP survey in 1999). These equipment items either disappeared in facilities' reports (but are still actually used), or were decommissioned and PCBs-containing wastes were illegally "recycled" or eliminated. High officials of governmental environmental bodies of the region were seriously concerned about these results. Similar developments may be observed in other regions of the country if we account for bankruptcies and liquidation of some production facilities and other entities that operated PCBs-containing equipment.

In order to identify the real amounts of PCBs-containing electric equipment, it is necessary to conduct public inventories of such equipment. Inventories of PCBs-containing equipment in regions of the Russian Federation may be financed by regional budgets or by international grants (e.g. UNEP, GEF, etc.).

On January 31, 2006, at the final stage of the project, a roundtable discussion was conducted at the Chemical R&D Institute of N.I.Lobachevskiy Nizhniy Novgorod State University to discuss the results of the project. The project results were submitted to representatives of the Committee for Nature Conservation and Natural Resources Management of Nizhegorodskaya Oblast and the Federal Service for Nuclear and Technological Supervision in Nizhegorodskaya Oblast.

In 2006, Eco-SPES NGO asked Mr. V.P.Shantsev (the Governor of Nizhegorodskaya Oblast) to consider the option of issuing a Resolution of the Administration of Nizhegorodskaya Oblast on organisation of registration of PCBs-containing equipment and utilisation of highly toxic PCBs-containing waste and on allocation of funds from the Environmental Fund of Nizhegorodskaya Oblast for assessment of PCBs levels in environmental media.

Among other positive outcomes of the project, the Governor of Nizhegorodskaya Oblast instructed the Committee for Nature Conservation and Natural Resources Management of Nizhegorodskaya Oblast to draft the Resolution of the Administration of Nizhegorodskaya Oblast on Organisation of Registration of PCBs-containing Equipment and Utilisation of Highly Toxic PCBs-containing Waste.

Eco-SPES NGO submitted the following information as recommendations to the Committee for Nature Conservation and Natural Resources Management of Nizhegorodskaya Oblast and the Federal Service for Nuclear and Technological Supervision in Nizhegorodskaya Oblast, for joint activities with NGOs of the oblast and for development of the draft Resolution of the Administration of Nizhegorodskaya Oblast:

- Information on results of inventories of PCBs-containing electric equipment, operated by facilities of Nizhegorodskaya Oblast (including information on amounts of PCBs-containing dielectric liquids),
- Information on key sources of PCBs at the territory of the region;
- Regulations and methodological information on polychlorinated biphenyls,

- Surveys of available Russian and foreign technologies for elimination of polychlorinated biphenyls,
- The survey of legislative acts on registration and management of PCBs-containing dielectric liquids in electric equipment and PCBs-containing waste at territories of the Russian Federation and abroad,
- Information on the results of PCBs monitoring in environmental media in the territory of Nizhegorodskaya Oblast, collected in the course of implementation of the project of Eco-SPES NGO,
- Information on environmental contamination by PCBs, dioxins and furans in the territory of Nizhegorodskaya Oblast,
- Reference information on scientific and research facilities operating in the sphere of POPs monitoring (including monitoring of PCBs) in the Russian Federation.
- Materials, published in the course of implementation of the project of Eco-SPES NGO,
- Informational materials on options to address the problem of POPs according to requirements of the Stockholm Convention.

Now, on request of governmental environmental bodies, the Chemical R&D Institute of N.I.Lobachevskiy Nizhniy Novgorod State University, with participation of Eco-SPES NGO, is conducting assessments of technologies for elimination of polychlorinated biphenyls and reviews issues, associated with potential construction of a facility for safe elimination of PCBs and PCBs-containing waste in the territory of the oblast.

An information dissemination centre was established by Eco-SPES NGO to provide information on regional hot-spots (sources of PCB pollution) to the oblast residents and mass media outlets.

PCBs-containing electric equipment at the territory of Nizhegorodskaya Oblast:

In 1999, at the territory of Nizhegorodskaya Oblast, there were

14,141 electric equipment items, including:

336 transformers,

13,803 capacitors,

The overall amount of PCBs ~ 985 tons.

In 2005, according to the survey results, there were

1,191 electric equipment items, including:

53 transformers,

984 capacitors,

The overall amount of PCBs (documented) ~ 120.5 tons.

Now, there is no clear information on

13,102 electric equipment items:

283 transformers,

12,819 capacitors,

The overall amount of PCBs ~ 864.5 tons.

REFERENCE INFORMATION

1. Now, according to the inventory of Eco-SPES, the following regional facilities have the following electric equipment items:

No	Facilities	Total equipment items in 2005	Total equipment items		PCBs-containing liquids, tons
			Capacitors	Transformers	
1	2	3	4	5	6.000
1.	"DPO Plastik" Co., Dzerzhinsk	149	122	27	~ 74.000*
2.	"Vyksa Metallurgy Plant" Co., Vyksa	220	198	22	~ 34.323
3.	"Sokol" Nizhniy Novgorod Aircraft Plant	98	98	-	1.748
4.	"LUKOIL-Nizhegoridneftesintez", Kstovo	4	-	4	~ 0.730
5.	"GAZ" Co., Nizhniy Novgorod	154			
6.	"Kulebaky Metallurgy Plant" Co.	566*	566*		9.740*
	Total:	1191	984	53	120.551

* - data from 1999

2. Besides that, according to facilities' reports, PCBs-containing electric equipment (amounts of PCBs are unknown) is used by:

"Arzamas Engineering Plant" Co., Arzamas.

3. Electric equipment items, identified at facilities that were not covered by AMAP reports:

Facilities	Total equipment items in 2005	Transformers	Capacitors	PCBs-containing liquids, tons
Vyksa Metallurgy Plant" Co., Vyksa	220	22	198	~ 50
"Arzamas Engineering Plant" Co.	equipment present			
Total:	220	22	198	~ 50

4. Facilities, that had PCBs-containing electric equipment in 1999 (according to the inventory of the Ministry of Environment and the Ministry of Industry and Science of the Russian Federation), but reported no such equipment in 2005:

Facilities	Total equipment items in 2005	Transformers	Capacitors	PCBs-containing liquids, tons
"RUMO" Co.	949		949	9.860
"Nizhniy Novgorod Engineering Plant" Co.	363	2	361	10.220
"Suvenir" Pavlovo Artistic Handicrafts Plant	2	2		3.000
"Kazakovo Artistic Handicrafts Facility"	4	4		6.000
"TRUD" Co.	13	13		14.200
"START" Co. (Sosnovskiy district)	12	12		18.000
"SLYUDA" Co.	3	3		4.740
"Orgsintez" Co.	25	10	15	17.720
Facilities of "NizhNovEnegro" and its power generating companies	8086		8086	168.388
Equipment (total):	9457	46	9411	252.128

5. Some facilities that refused to report on presence/lack of PCBs-containing electric equipment items may have/operate such equipment and generate POPs emissions:

- "Teploobmennik" Co.,
- "Krasnoye Sormovo Plant" Co.,
- "Arzamas Engineering Plant" Co., Arzamas,
- "Lindovo Poultry Facility" Co.,
- "Vorsma Poultry Facility" Co.,
- "Krasniy Yakor" Co.,
- "G.I. Petrovskiy Plant" Co.,
- "Nizhniy Novgorod Underground Railway" Municipal Facility,
- "Zavolzhskiy Engine Plant" Co.,
- "Nizhniy Novgorod Bakery" Co.,
- The International Airport of Nizhniy Novgorod Co.