



Project Implementation Report

(1 July 2021 – 30 June 2022)

Project Title:	<i>Environmentally Sound Management and Final Disposal of PCBs at the Russian Railroad Network and Other PCBs Owners</i>
GEF ID:	4915
UNIDO ID:	140019
GEF Replenishment Cycle:	GEF-5
Country(ies):	<i>The Russian Federation</i>
Region:	<i>ECA - Europe and Central Asia</i>
GEF Focal Area:	<i>Persistent Organic Pollutants (POPs)</i>
Integrated Approach Pilot (IAP) Programs¹:	<i>Not applicable</i>
Stand-alone / Child Project:	<i>Stand-alone</i>
Implementing Department/Division:	<i>ENV / IPM</i>
Co-Implementing Agency:	<i>Not applicable</i>
Executing Agency(ies):	<i>Ministry of Natural Resources and Environment of Russia</i>
Project Type:	<i>Full-Sized Project (FSP)</i>
Project Duration:	<i>99 months</i>
Extension(s):	<i>4</i>
GEF Project Financing:	<i>7,400,000 USD</i>
Agency Fee:	<i>703,000 USD</i>
Co-financing Amount:	<i>34,200,000 USD</i>
Date of CEO Endorsement/Approval:	<i>11/20/2013</i>
UNIDO Approval Date:	<i>1/20/2014</i>
Actual Implementation Start:	<i>2/5/2014</i>
Cumulative disbursement as of 30 June 2022:	<i>7,370,191</i>
Mid-term Review (MTR) Date:	<i>3/23/2017</i>
Original Project Completion Date:	<i>10/5/2018</i>

¹ Only for GEF-6 projects, if applicable

Project Completion Date as reported in FY21:	8/31/2021
Current SAP Completion Date:	4/30/2022
Actual Project Completion Date:	5/25/2022
Expected Terminal Evaluation (TE) Date:	9/15/2022
Expected Financial Closure Date:	12/31/2022
UNIDO Project Manager²:	<i>Sergey Korotkov</i>

I. Brief description of project and status overview

Project Objective
<p>The objective of the project is establishment of the system for PCBs management in the Russian Federation in compliance with the requirements of the Stockholm Convention on Persistent Organic Pollutants (POPs). The project is the first stage of the nation-wide program on phasing-out of PCBs in all branches of industry. The main goals of the project are establishment of effective PCB management system and creation the related infrastructure. The Project creates an organized system for PCB management and sets an example how to phase-out PCB-containing equipment at the companies who are PCB-owners.</p>

Baseline
<p>The Russian Federation signed the Stockholm Convention on May 22, 2002. President of the Russian Federation adopted the decision on ratification of the Convention. The relevant federal law №164-FZ "On the ratification of the Stockholm Convention on Persistent Organic Pollutants" was signed on 27 June 2011. One of the most problem-plagued POPs for Russia is polychlorinated biphenyls (PCBs). The quantity of PCB-containing wastes that are stored in various industries - energy, transport and defence - is a number of tens of tons. To date a significant number of transformers and capacitors, which are filled with dielectric fluids such as Sovtol, Sovol and Trichlorobiphenyl (TCB) are contaminated or cross-contaminated by PCBs. According to the documentary inventory carried out in Russia, 106 organizations of the fuel and energy complex have accumulated 7245 tons of synthetic PCB-containing transformer oil. The organizations have 152,572 items on their balance sheets. electrical equipment containing PCBs, including 1313 transformers and 151 259 capacitors. More than 80% of capacitors and 90% of transformers are in operation. The total share of the fuel and energy complex in the total volume of PCBs in Russia is about 27%. The total amount of PCBs on the territory of the Russian Federation is estimated at 28,000-30,000 tons. The instrumental inventory of energy equipment for PCBs presence was never carried out in Russia. So that, the real quantity of PCBs in Russia is unknown. In order to fulfil the requirements of the Stockholm Convention, as well as overcome the existing disadvantages in the regulatory, laboratory and technological support of the carriage the International Agreement in the Russian Federation the Project was started.</p>

Overall Ratings³	FY22	FY21
------------------------------------	-------------	-------------

² Person responsible for report content

³ Please refer to the explanatory note at the end of the document and assure that the indicated ratings correspond to the narrative of the report

Global Environmental Objectives (GEOs) / Development Objectives (DOs) Rating	Satisfactory (S)	Satisfactory (S)
<i>Project implemented.</i>		
Implementation Progress (IP) Rating	Satisfactory (S)	Satisfactory (S)
<i>Project implemented.</i>		
Overall Risk Rating	Low Risk (L)	Low Risk (L)
<i>Project implemented.</i>		

II. Targeted results and progress to-date

Please describe the progress made in achieving the outputs against key performance indicator's targets in the project's **M&E Plan/Log-Frame at the time of CEO Endorsement/Approval**. Please expand the table as needed.

Project Strategy	KPIs/Indicators	Target level	Progress in 2022
Component 1.: Institutional regulatory and human resources capacity building for establishment and operation of ESM system for PCB disposal	A new set of regulatory instruments and guidance documents in compliance with Stockholm Convention requirements on PCBs (Annex A, part II) is adopted.	The national legislation and technical regulation updated to be in line with the requirements of SC on POPs	International and Russian legislation, including Stockholm Convention documents, and best practices on PCB management were thoroughly studied and compared to current Russian legal status of PCBs. The national legislation and technical regulation were updated to be in line with the requirements of Stockholm Convention on POPs. Proposals on amendments to existing legislation were formulated based on analysis of international

<p>Outcome 1.: Strengthening of legislation and policy framework and enforcement of PCBs management to meet relevant obligations under the Stockholm Convention</p>	<p>Guidelines for identification, labelling, packaging, transportation and disposal are developed. The text of a new set of regulatory instruments in compliance with requirements of SC on PCBs (Annex A, part II) drafted, discussed with the relevant stakeholders and submitted for the law approval procedures.</p>	<p>Regulatory instruments, including a framework regulation on PCBs and official guidance on PCB management is drafted, submitted to the relevant legislative bodies, and officially adopted.</p>	<p>legal practice. Later on they were submitted to the relevant executive and legislation bodies in the course of the cooperation between the Project and its stakeholders.</p> <p>A number of relevant PCB regulations were adopted by the Government of the Russian Federation in order to improve PCB management.</p> <p>Guidelines for identification, labelling, packaging, transportation, and disposal have been developed and sent for consideration to the relevant bodies.</p> <p>Training of different professional groups (decision makers, environmental inspectors, customs officers, health professionals, local authorities etc) in safe PCB management was held all over the country. In addition to it training of more than 600 people from the energy supply objects, executive bodies and public health protection authorities has been held.</p>
<p>Output 1.1: Policy and regulatory framework strengthened</p>	<p>The current regulatory framework will be assessed and compare with Stockholm Convention requirements, Basel Convention and international regulation on PCBs.</p>	<p>Official guidance documents concerning PCB identification, labeling, handling and disposal drafted and officially approved. Text of the framework regulations on PCBs. Official guidance documents approved and demonstrated in the project. Draft regulation submitted for approval procedure</p>	<p>Reporting period 2021-2022</p> <p>The project team continues to be active in the framework of the Plan for the implementation of the Stockholm Convention on POPs in Russia. The UNIDO project team is an active member of the Working Group, participates in meetings, and develops the necessary proposals to improve the legal framework for PCB management. The UNIDO team is in constant communication with the representatives of the Working Group, and also provides the necessary information regarding the implementation of the project. Thus, the project manager took an active part in the meetings of the Federation Council Committee on Economic Policy and provided up-to-date information on promoting the interests of Russian business and facilitating the transfer of Russian technologies through UNIDO, incl. within the framework of PCB management. National project experts in 2022 participated in various events and conferences to promote the goals of the project. The project experts talked about the fact that conducting a comprehensive inventory of PCBs in organizations of various industries should be prepared methodically, organizationally and instrumentally, and such an inventory would comply with the plan for the implementation of the Stockholm Convention on POPs.</p>
<p>Output 1.2: Staff of the federal and regional government agencies, customs authorities, NGO's and PCB owners trained on the new regulations</p>	<p>A PCB training Center will established at the Russian Railroad Corporation Training Center in cooperation with the Oil and Gas University.</p>	<p>Establishment of a training center inside the Railroad Company training Center in cooperation with the Moscow Oil and Gas university</p>	<p>As a result of past events, resolutions were drawn up, which were distributed among interested organizations for the development of new initiatives within the framework of the project.</p>
<p>Output 1.3: ESM measures for safe management/disposal of PCB wastes and occupational health introduced</p>	<p>Requirements for measuring worker exposure to PCBs when handling or disposing PCBs are established.</p>	<p>A new requirement to monitor workplace where PCBs are being handled or disposed is established.</p>	<p>As a result of past events, resolutions were drawn up, which were distributed among interested organizations for the development of new initiatives within the framework of the project.</p> <p>Awards</p> <p>The project received a diploma from the prestigious international environmental competition "EcoWorld-2021" held by the Russian Academy of Natural Sciences in November 2021. Participants of the competition are awarded for outstanding achievements in environmental protection and environmental safety, education, new technologies, as well as in other environmental activities aimed at sustainable development.</p>

<p>Component 2.: Country-wide inventory of PCB-contaminated equipment and wastes based on PCBs inventory and risk assessment for efficient allocation of human and economic resources</p>	<p>Availability of a PCB inventory including sample and monitoring data concerning at least 50,000 transformers. Availability of a PCB management plan drafted and agreed by relevant stakeholders.</p>	<p>A PCB inventory (including labelling and registration of identified PCB equipment in the project PCB database) carried out countrywide. Testing of 50,000 transformers carried out. A PCB management plan for the project, based on inventory outcome and priority considerations, which can be used as a model for the country PCB management plan, drafted and agreed among relevant stakeholders</p>	<p>At the moment, in the Russian Federation testing chemical-analytical laboratories have been created and put into trial operation, which allow analyzing samples of electrically insulating liquids for the presence and concentration of PCBs according to GOST IEC 61619-2014. The laboratories comply with the requirements established in the international standard ISO/IEC 17025:2017 (GOST ISO/IEC 17025-2019) and have successfully passed accreditation for PCB analysis. The project experts are actively working with equipment suppliers, supervise the process of creating the plant, provide the necessary methodological information, pollutant concentration and will accelerate the pace of fulfillment by the Russian Federation of obligations under the Stockholm Convention on POPs. The results of the analyzes carried out can be used to confirm the fulfillment of obligations under the Stockholm Convention, as well as help enterprises develop a competent plan for the complete withdrawal of PCBs from their circulation.</p>
<p>Outcome 2.: Development of strategy and plan of action for management, decontamination and disposal of PCB-contaminated equipment and wastes based on PCBs inventory and risk assessment for efficient allocation of human and economic resources</p>	<p>An internationally accepted analytical method for testing PCB oil selected. 3-4 laboratories accredited for conducting PCB analysis with such method. Sampling and analysis of 50,000 transformers is carried out.</p>		
<p>Output 2.1: Methods for PCBs analysis adopted and 3-4 laboratories accredited for PCB analysis</p>	<p>One of the existing international analytical methods for testing PCB oil selected. 3-4 laboratories properly equipped for using that method and accredited for conducting PCB analysis with such method. Laboratory staff trained on the PCB analytical methods</p>	<p>At least three laboratories are upgraded with equipment for carrying out PCB analysis using an international standard method and accredited. Staff from the laboratories trained and accredited on the new methods.</p>	
<p>Output 2.2: Extended inventory on PCBs undertaken</p>	<p>An inventory team to carry out sampling and labeling of 50,000 transformers throughout the country, trained on the overall procedure for PCB equipment identification, labeling and</p>	<p>Code of Practice for identifying, labelling, tracking and screening analysis of PCBs is drafted. At least 30 operators trained on the implementation of such a code of practice (theoretical and hands-on training). Inventory teams established throughout the country</p>	

	tracking with proper technical code of practices is established. Extended inventory including sampling of 50,000 transformers throughout the country is carried out.	and an inventory coordination unit established. Inventory including sampling and analysis of 50,000 transformers is carried out.	
Output 2.3: PCBs inventory labelling and database established	A PCBs database, linked to a GIS and codes of all the equipment inventoried, will be established.	A PCB database containing PCB inventory data which univocally identify any single PCB equipment, linked to a geo-referenced traceability system is implemented.	
Component 3: Environmentally sound management (ESM) and disposal of PCB contaminated equipment and wastes	Technologies for disposal of PCBs compliant with the BAT/BEP requirements established under the Stockholm Convention of POPs will be established.		Technologies for disposal PCBs compliant with BAT/BEP requirements selected. Disposal component consists of two parts: a) decontamination of low contaminated wastes. This activity is underway by the technology procured by the project. On July 26, 2019, Russian Government adopted Federal Law No. 225, which empowers State corporation Rosatom to regulate the management of waste of hazard class 1-2 and to determine federal waste management operator in the framework of the National Project "Ecology". In the course of this Project Rusatom Greenway LLC has been appointed waste management integrator responsible, among other, for building 3 waste management complexes, which will include PCB processing capacities. Thus, mobile non-combustion PCB Treatment installation "Meliiform-PCB-5000" was transferred LLC "Rusatom Greenway". Now adays the installation is set at the site of Rusatom Greenway (c. Krasnoyarsk) and ready for the operation. UNIDO project team constantly cooperates with Rusatom Greenway and controls the state of the unit.
Outcome 3: Establishment of ESM system / structure for PCBs and disposal of 3,800 tons of PCBs and PCB-contaminated equipment and wastes	Technologies for dechlorination of PCB contaminated oil, and decontamination of the metallic part of the transformer carcasses will be selected and established. The technologies will be of enough capacity to treat at least 3800 tons of low contaminated PCB oil, transformer carcasses and porous material contaminated by PCBs within the project timeframe. A treatment facility for incineration of high grade PCB oil will be operational as well.	Technologies compliant with SC BAT/BEP will be established for the treatment of 3800 tons of PCB contaminated equipment.	b) the high contaminated wastes are to be disposed by another technology, which is still at the stage of its production. The initial contract for the technology was signed by UNIDO with a Finish company, but the Contractor was not able to produce the equipment. The contract was cancelled, and the new bidding was open. The new Contractor started the process of manufacturing but ran into the problems of the present situation in the country when the economic activities are delayed by the restrictions of imposed by COVID-19. Now adays the completion of the production of high-oxidation unit is completed. All tests were properly executed. The unit is being transferred to the site where the future operation of the unit will be realized.
Output 3.1: System for Environmentally Safe Packaging, Storage, and Transportation of PCBs established	A system for the packaging, temporary storage and transportation of PCBs equipment and PCBs waste, including both procedures and infrastructures	Guidance procedures for the packaging, temporary storage, transportation and disposal of PCBs in Russia put in place and verified. At least 3 temporary storage facilities and railroad	

	ensuring capacity beyond project objectives, is established	infrastructures (i.e. dedicated wagons/platforms) established or upgraded for the storage, packaging and long-range transportation of PCBs	
Output 3.2: Environmentally Safe Disposal Technology is selected	A technical and economical analysis of available PCB treatment technologies based on the specific situation of the Russian Federation in general and of the Railroad Russian Corporation in particular, identifying the best option for PCB treatment, is carried out.	A set of technologies for the disposal / treatment of low contaminated PCB equipment, metal carcasses and porous material are identified and their relevant parameters concerning disposal capacity requirements, reliability and environmental performance are evaluated.	
Output 3.3: Environmentally Safe Disposal of 3800 tons of PCB containing equipment and PCB wastes	Suitable disposal technology for the ESM disposal of PCBs equipment/waste tested and permitted, for an overall disposal capacity suitable to satisfy or exceed project need (3800 tons of PCBs). Amount of PCBs equipment and waste successfully disposed.	One stationary and 2 mobile suitable disposal facilities, compliant with the SC BAT/BEP criteria, for a capacity suitable to fulfill or exceed project needs, established, tested and permitted. 3800 tons of PCBs equipment or waste disposed by means of such facility.	
Outcome 4.: M&E mechanism designed and implemented	Monitoring and evaluation reports	Monitoring and evaluation team established in due time. All Project reports (APRs, AWP, PIRs) effectively drafted and timely delivered.	All reports are being prepared in time, including Annual PCB Progress Reports, Final reports of ISA holders, PIRs etc. Project team highly contributes to the preparation of Final Report.

III. Project Risk Management

1. Please indicate the overall project-level risks and the related risk management measures: (i) as identified in the CEO Endorsement document, and (ii) progress to-date. Please expand the table as needed.

Describe in tabular form the risks observed and priority mitigation activities undertaken during the reporting period in line with the project document. Note that risks, risk level and mitigations measures should be consistent with the ones identified in the CEO Endorsement/Approval document. Please also consider the project's ability to adopt the adaptive management approach in remediating any of the risks that had been

sub-optimally rated (H. S) in the previous reporting cycle.

Assumptions and Risks	Risk Level FY 21	Risk Level FY 22	Mitigation Measures	Progress to-date
Outcome 1.: Strengthening of legislation and policy framework and enforcement of PCBs management to meet relevant obligations under the Convention				
Delays in developing and enacting new PCBs guidelines and regulations	M	M	The MNRE and other key stakeholders will participate as equal partners in developing the guidelines and regulations. The new guidelines will first be applied to a single region of the country and based on this experience; it will be prepared and request the parliament to issue it as a regulation	<p>The MNRE and other stakeholders highly support the implementation of the Project during all its stages. The guidelines that were prepared in the framework of the Project were approved by MNRE.</p> <p>Moreover, the Working Group established by MNRE continues its work nowadays. During 2021-2022 the meetings concerning the improvement of Russian legislation in the field of industrial safety and PCB management were held.</p> <p>During the reporting period, cooperation was carried out with civil society organizations in the framework of raising public awareness, as well as with scientific organizations working on persistent organic pollutants. Cooperation includes consultations on the implementation of the Stockholm Convention on POPs in the Russian Federation, discussion of regulatory legal acts regarding the regulation of PCB handling, exchange of experience in the inventory and destruction of PCBs.</p>
Lack of national support for the enactment of regulations to manage PCBs	L	L	The preparation of the new regulations would be an open exercise with participation of all stakeholders. This will follow similar pattern as applied to the new regulations regarding Ozone Depleting Substances counterparts. The project established cooperation with the ODS project and will use the experience of the latter project team	<p>In the beginning of the project in cooperation with Federal Service for Supervision of Natural Resources Usage (Rosprirodnadzor) the working group for improvement of legislation was established.</p> <p>UNIDO team were included in Interagency Group for NIP coordination in order to participate on the development of Road Map for legacy improvement to meet the requirements of Stockholm Convention on POPs. The constant work for road-map development and improvement has been held.</p> <p>The set of regulatory documents on PCBs management has been prepared, approved by the Federal bodies and regions of Russia, and passed for approval to the State Duma. An important achievement was removal of administrative barriers to the import into Russia of analytical standards and chemical reagents containing PCBs. With the assistance of the UNIDO Centre in the Russian Federation, the Council of the Eurasian Economic Commission made amendments to the Decision of the EEC Board of April 21, 2015 No. 30 "On non-tariff regulation</p>

				measures”, according to which the import of analytical standards and chemical reagents containing PCBs for chemical analysis is permitted in accordance with the provisions of the Stockholm Convention on POPs.
PCB-owners will be reluctant to accept and comply with new regulations	L	L	The guidelines and new regulations, in their draft forms, will be first applied on a voluntary basis in RZD that cover the country as a whole and to a small number of companies in a selected region of the country	UNIDO team sent the guidelines to the main partners of the project and other relevant organizations, such as Russian Energy Agency, Russian Railways, Federal Service for supervision of natural resources, National coordination centre for Stockholm Convention on POPs. UNIDO recommended these organizations to disseminate the guidelines to other agencies if necessary.
Laboratories fail to meet accreditation requirements.	L	L	Three different laboratories, namely one belongs to RZD company; another corresponding to the Oil and Gas University and the third one of a commercial lab will be trained to seek and achieve accreditation	The laboratory infrastructure for PCB analysis has been established and their accreditation has been completed. The laboratories are fully prepared for the analysis and supporting in inventory.
Ministry of Natural Resources and the Environment fail to upgrade information into the database being created by the project to register and record unit's fate and to report country's progress in the elimination of PCBs	L	L	Database and registry system will be users friendly to facilitate its use and understanding. UNIDO will identify the most acceptable database of other similar projects and propose it as a sample for elaboration	The Database on control of PCBs contaminated equipment and wastes has been created and put into operation. It will be properly fulfilled with the results of analysis after their completion. UNIDO team constantly communicates with relevant organizations in order to improve the Database.
Outcome 2: Strengthening institutional capacities to carry out PCB inventory				
Errors in data management of analytical result during sampling and testing of large number of electrical transformers	M	M	Operators taking oil samples from transformers and analyzing for PCBs will be fully trained and in the procedures to sample the transformers, analyzing the oil and registering transformers' data and analytical results	The specialists of RZD have been trained with the rules of PCB inventory while working with them. Russian Railways in cooperation with UNIDO team has elaborated the instruction for sampling the transformer oils.
Lack of support from transformers owners to make their equipment available to the project for sampling and testing	L	L	Most of the samples to be taken (up to 90%) will be from the RZD company that is fully committed to the project	RZD has provided the access to their transformers and sites for the sampling, 17500 samples have been taken.
Accidental exposure to electrical shocks and/or PCB during transformer oil samples being taken during inventory exercise	M	M	Only technical personnel of substations will be requested to take samples of oil. Operators taken samples from transformers will be fully trained in working with or near energized transformers, the risk associated with exposure to PCBs and have to wear proper protective equipment when performing the job	The Russian Railroads safety procedures when taking samples from the working power transformers were disseminated among the personnel participated in the inventory process. The related training and instructions have been made. Only trained personnel with the proper education level and working experience is authorised to take the samples from transformers.
Resistance of stakeholders to accept results showing transformers in their system are contaminated with PCBs	L	L	The RZD company is a state-owned, environmentally responsible company that is committed to eliminate PCBs from its equipment	RZD took part in all sampling processes and are ready for analysis. Moreover, the analytical laboratories are selected, and properly equipped. Their staff has been trained in PCBs analysis according to the State Standard GOST R IEC 61619-2013. Only those laboratories that are accredited for PCBs analysis

				will be involved in testing of transformer oils.
Limited interest amongst PCB owners to accept the existence of PCB contaminated transformers amongst their equipment and to take actions to eliminate them	M	M	Stakeholder awareness workshops will be organized to promote the project objectives and to inform that compliance with Stockholm Convention is everyone's responsibility and not only the government's	<p>The interest in PCB management has been increased. During the reported period, the Project was presented at the several meetings as a successful example of implementation of Stockholm Convention on POPs obligations.</p> <p>The project received a diploma from the prestigious international environmental competition "EcoWorld-2021" held by the Russian Academy of Natural Sciences in November 2021. Participants of the competition are awarded for outstanding achievements in environmental protection and environmental safety, education, new technologies, as well as in other environmental activities aimed at sustainable development. National project experts in 2021-2022 participated in various events and conferences to promote the goals of the project</p> <p>The project experts talked about the fact that conducting a comprehensive inventory of PCBs in organizations of various industries should be prepared methodically, organizationally and instrumentally, and such an inventory would comply with the plan for the implementation of the Stockholm Convention on POPs. As a result of past events, resolutions were drawn up, which were distributed among interested organizations for the development of new initiatives within the framework of the project</p>
Russia's PCB phase-out plans will not comply with the objectives of Basel and Stockholm Conventions	L	L	The PCB national phase out plan will be developed in contacts with PCB owners to make sure its feasibility	The Working Group has developed an Action Plan ("road map") to improve the national regulation in order to fulfill the Russian Federation's obligations under the Stockholm Convention on POPs (hereinafter referred to as the Action Plan). The Action Plan reflects the directions of policy-making activities for the period of 2019-2022 and includes, among others development and approval of regulatory legal acts for PCBs management. In September 2020 the Deputy Minister of Energy of Russia sent the letter for 40 PCB-owners in Russia in order to carry out the instrumental inventory of PCB-containing equipment. Thus, the PCB-owners were informed about the necessity to fulfill the obligations of Stockholm Convention requirements and started to make a phase-out plan.
PCB-containing equipment will continue to be managed in an environmentally unsound manner	L	L	The proper management of PCBs is an economically attractive when compare to the efforts and costs associated with cleaning up contaminated sites following PCB spills. Awareness raising will bring this	Several meetings with owners of PCB-containing equipment were held. Moreover, the Project team has been established the collaboration with LLC Rusatom Greenway, the daughter company of Rosatom which was appointed national hazardous waste

			understanding to the owners of equipment	operator by the Russian government. Rusatom Greenway actively disseminate information on PCB management and increase the awareness of the owners of the equipment.
PCB-related guidelines will not be properly adjusted to real life situations	L	L	The general guidelines covering all aspects of PCB management will be developed using proven measures. The process will be assisted by international experts and done in close consultation with Russian's Stakeholders	The general guidelines developed to provide assistance on a number of issues: from identification and maintenance of appropriate equipment, to decommissioning of contaminated units, as well as transportation, temporary storage and final destruction of materials or wastes containing PCBs. In addition, safety and emergency procedures related to all stages of the PCB management form an integral part of this document.
Outcome 3: Demonstration of ESM of PCBs through proper collection, packaging, registration, labelling, transportation, storage and disposal of targeted PCBs wastes				
Russia's PCB-owners will not be properly informed of PCB treatment alternatives being created by the project and will not prepare phase-out plans to manage their PCB containing equipment and wastes	L	L	The project's objectives will be promoted amongst PCB owners and other stakeholders using workshops and training sessions. The reduced disposal cost using local alternatives compared to exporting the waste will be promoted to allow Russian's PCB owners to plan the treatment and/or removal of their PCB containing equipment	The PCB training Centre established during the project will be properly operating and will be able to give PCB owners all required information in future.
Accidental PCB releases due to PCB dechlorination and/or decontamination equipment breakdown	L	L	Technologies selection criteria will include requirements for proven commercial application with clean track records. The built system will contain protective measures to avoid such accidents, their operation will have contingency plan to protect the environment and human health	The technology selected for PCBs treatment has a positive history of commercial application. The safety measures to prevent accidental PCBs releases have been formulated in ToR. Nowadays, the manufacturing of PCB destruction unit for disposal of highly PCB-contaminated liquid based on high-temperature oxidation was completed.
Poor handling and storage of PCB contaminated equipment representing an environmental and/or health hazard	M	M	The project will develop guidelines for the proper handling, packaging, storage and disposal of PCB containing equipment and wastes. Operators involved in this kind of operation will be properly trained before being asked to carry out such activities	The safety rules and guidance on proper storage of PCB-contaminated equipment and wastes have been developed and continues to be disseminated among the local staff of the Project stakeholders.
Russian's climate conditions will affect performance and efficiency of PCB treatment facilities or activities being carried out as part of the project	L	L	Other countries with climate conditions similar to Russia have successfully implemented PCB treatment and disposal facilities and technologies. Project's activities such as PCB handling and transportation will be carried out according to prevailing climate conditions to reduce the potential for environmental accidental releases	Sampling and transportation of transformer oils is performed in accordance with related safety guidance that minimizes influence of weather conditions and risks associated. The units for PCBs treatment and disposal are required to be designed in containers that eliminate weather conditions impact.
Worker safety compromised during PCB management activities	L	L	Safety procedures to protect workers against PCB exposure and electrical shocks will be developed and workers and supervisors properly trained before getting involved in the handling of PCB containing equipment and wastes	The trainings on PCBs environmentally sound management for technical specialists and managers of energy enterprises, employees of federal and regional executive authorities were conducted. Methodological materials for teaching of various target groups on

				<p>PCBs environmentally sound management issues have been developed. These materials includes:</p> <ul style="list-style-type: none"> • A set of educational, methodological and informational materials on the management of PCB handling for government agencies, and decision-making managers of organizations; • A set of educational, methodological and informational materials on PCBs management for environmental inspectors; • A set of educational, methodological and informational materials on PCB management for Russian customs officers; • A set of educational, methodological and informational materials on PCB management for employees of companies engaged in PCB handling (packaging, storage, transportation and disposal of hazardous waste).
--	--	--	--	---

2. If the project received a sub-optimal risk rating (H, S) in the previous reporting period, please state the actions taken since then to mitigate the relevant risks and improve the related risk rating. Please also elaborate on reasons that may have impeded any of the sub-optimal risk ratings from improving in the current reporting cycle; please indicate actions planned for the next reporting cycle to remediate this.

If the project has received a sub-optimal risk rating in FY21, please elaborate here on any actions taken towards the mitigation of these risks.

3. Please indicate any implication of the **COVID-19** pandemic on the progress of the project.

The outbreak of COVID-19 has affected the project implementation. Due to the pandemic situation, manufacturing of disposal unit has been postponed. The subscriber of the contract ran into the problems of the present situation in the country when the economic activities are delayed by the restrictions of imposed by the COVID-19.

Prevention measures.
 Due to actions made by project management, all meetings and activities have been done remotely. All members of Project team were in safety and observed all required measures in order to prevent the spread of COVID-19. Zoom meetings were conducted 1-2 times per week (or more often upon the request of PM). The members of project team had the access to the necessary equipment (computers, printers, scanners, etc.) during the period of emergency. The project manager created the reporting system in Trello app, where all members of Project team were able to show their progress as well as several chats in different messengers were created in order to ensure the qualitative communication. Interaction with project stakeholders has been done remotely as well.

4. Please clarify if the project is facing delays and is expected to request an **extension**.

NA

5. Please provide the **main findings and recommendations of completed MTR**, and elaborate on any actions taken towards the recommendations included in the report.

The risks and recommendations that were described in MTR (held in 2017) were taken into account and followed by PM and project team.

E.g.

1. Given the current status of Project progress and identified risks, the Project is unlikely to reach its development objectives related, in particular, to safe disposal of 3800 tons of PCBs within the Project timeframe (as stated in the original Project design). To make the achievement of the Project's goals realistic, the duration of the Project in the opinion of the Reviewers should be extended by at least 1 year.

So the project was extended for sufficient time in order to complete the results required.

2. The Project management should set up a deadline for the expected Government decisions and explicitly track the risks associated with further delays. The situation should be monitored and reported regularly to the relevant stakeholders at UNIDO and GEF.

In this case the Project team succeeded, and all required Government decisions were made in time and facilitated the implementation of the Project.

3. In the meantime the Project implementation approach should be focused on activities not directly affected by the identified risks.

All assessed projects risks were overcome.

4. Project counterparts should improve planning and transparency of co-financing by clearly indicating allocation of the resources in the annual work programmes and reporting on their materialization in annual progress reports.

Project counterparts submitted the detailed co-financing reports in order to present the transparency.

5. Improve quality of annual reports, including analysis of target achievements, shortcomings and measures to adapt implementation strategies.

The Annual reports and Progress reports were elaborated in more details and are able to present the necessary results for improving implementation strategy.

IV. Environmental and Social Safeguards (ESS)

1. As part of the requirements for **projects from GEF-6 onwards**, and based on the screening as per the UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP), which category is the project?

Category A project

Category B project

Category C project

(By selecting Category C, I confirm that the E&S risks of the project have not escalated to Category A or B).

Notes on new risks:

- *If new risks have been identified during implementation due to changes in, i.e. project design or context, these should also be listed in (ii) below.*
- *If these new/additional risks are related to Operational Safeguards #2, 3, 5, 6, or 8, please consult with UNIDO GEF Coordination to discuss next steps.*
- *Please refer to the UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP) on how to report on E&S issues.*

Please expand the table as needed.

	E&S risk	Mitigation measures undertaken during the reporting period	Monitoring methods and procedures used in the reporting period
(i) Risks identified in ESMP at time of CEO Endorsement			

(ii) New risks identified during project implementation (if not applicable, please insert 'NA' in each box)			
---	--	--	--

V. Stakeholder Engagement

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes** regarding engagement of stakeholders in the project (based on the Stakeholder Engagement Plan or equivalent document submitted at CEO Endorsement/Approval).

During the reporting period the constant consultations with all the Stakeholders were made. Due to the pandemic, most of consultations are being held remotely. During the reporting period, cooperation was carried out with civil society organizations in the framework of raising public awareness, as well as with scientific organizations working on persistent organic pollutants. Cooperation includes consultations on the implementation of the Stockholm Convention on POPs in the Russian Federation, discussion of regulatory legal acts regarding the regulation of PCB handling, exchange of experience in the inventory and destruction of PCBs.

2. Please provide any feedback submitted by national counterparts, GEF OFF, co-financiers, and other partners/stakeholders of the project (e.g. private sector, CSOs, NGOs, etc.).

The expected results from the implementation of the project in 2022 are fully consistent with the goals and objectives of the Project. The project received a diploma from the prestigious international environmental competition "EcoWorld-2021" held by the Russian Academy of Natural Sciences in November 2021. Participants of the competition are awarded for outstanding achievements in environmental protection and environmental safety, education, new technologies, as well as in other environmental activities aimed at sustainable development.

3. Please provide any **relevant stakeholder consultation** documents.

VI. Gender Mainstreaming

1. Using the previous reporting period as a basis, please report on the **progress achieved on implementing gender-responsive measures and using gender-sensitive indicators**, as documented at CEO Endorsement/Approval (in the project results framework, gender action plan or equivalent),.

The gender consideration was factored in the project activities. The project design did not make an explicit provisions of gender consideration. According to CEO Endorsement: "The project will promote the additional working places for women only where there are no direct contacts with PCBs (laboratories, monitoring, etc.). The awareness programme will assist to reduce accidental contacts with the contaminated wastes. [...] For women who need to participate in the project, the management of the participating companies will organize regular monitoring of the working conditions and possible risks of prevent their exposure to PCB, and, if possible, to move them other "non-hazardous" positions."

VII. Knowledge Management

1. Using the previous reporting period as a basis, please elaborate on any **knowledge management activities / products**, as documented at CEO Endorsement / Approval.

1. The project website stoppcb.ru is working and regularly updated.
2. The news on the project is being constantly published at official website of UNIDO CIIC (unido.ru) and its official Facebook page.
3. 10 Publications on project activities and PCBs problem have been posted during the reporting period.

2. Please list any **relevant knowledge management mechanisms / tools** that the project has generated.

- Website www.stoppcb.ru
- Website www.unido.ru

VIII. Implementation progress

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes achieved/observed** with regards to project implementation.

The Component 1 of the project focused on institutional, regulatory and human resources capacity building for establishment and operation of ESM system for PCB disposal. The Component was completed during the previous years, but some work is still being in progress. During the 2021-2022 FY in the framework of established Working Group for SC implementation, the Project team participated in all relevant meetings and took part in all discussions. Project team participated in several meetings in order to promote project activities and raise awareness of PCB management.

The Component 2 of the project designed to create the laboratory capacities and undertake the PCBs inventory in the country. Laboratories were manufactured, gained national and international accreditation, and put into trial operation and are fully ready for the operation.

The Component 3 of the project intended to creation the PCBs disposal facilities and disposal of 3800 tons of PCB contaminated equipment and wastes. This component is divided in two parts. During the Project it was found out that actions with PCB equipment divided in different ways of treatment and are determined depending on the degree of contamination. If PCB content is found in the range of 50 to 5000 mg / kg, purification is required. And if the PCB content reaches more than 5000 mg / kg, disposal in an environmentally friendly way is required. Thus, the 3rd component consists of two parts: treatment and disposal.

1) Mobile non-combustion PCB Treatment installation "Melioform-PCB-5000 was manufactured and transferred to the site of "Rusatom Greenway" LLC (the state operator of hazardous waste in Russia) in Krasnoyarsk and is ready for operation. The Project team constantly cooperates with Rusatom in order to check and control the state of the installation.

2) PCB disposal unit for disposal of highly PCB-contaminated liquid based on high-temperature oxidation was produced and successfully put into trial. Nowadays the unit is being transferred to the site of future operation.

2. Please briefly elaborate on any **minor amendments**⁴ to the approved project that may have been introduced during the implementation period or indicate as not applicable (NA).

Please tick each category for which a change has occurred and provide a description of the change in the related textbox. You may attach supporting documentation, as appropriate.

<input type="checkbox"/>	Results Framework	
<input type="checkbox"/>	Components and Cost	
<input type="checkbox"/>	Institutional and Implementation Arrangements	
<input type="checkbox"/>	Financial Management	
<input type="checkbox"/>	Implementation Schedule	
<input type="checkbox"/>	Executing Entity	
<input type="checkbox"/>	Executing Entity Category	
<input type="checkbox"/>	Minor Project Objective Change	
<input type="checkbox"/>	Safeguards	
<input type="checkbox"/>	Risk Analysis	
<input type="checkbox"/>	Increase of GEF Project Financing Up to 5%	
<input type="checkbox"/>	Co-Financing	
<input type="checkbox"/>	Location of Project Activities	
<input type="checkbox"/>	Others	

3. Please provide progress related to the **financial implementation** of the project.

Main expenditures for the reporting period were directed to the staffing, namely:

1. Consultants' payroll
2. Miscellaneous project costs

⁴ As described in Annex 9 of the *GEF Project and Program Cycle Policy Guidelines*, **minor amendments** are changes to the project design or implementation that do not have significant impact on the project objectives or scope, or an increase of the GEF project financing up to 5%.



GRANT DELIVERY REPORT

Grant:	2000002567	Grant Status:	Operationally completed	Grant Validity:	05.02.2014 - 30.04.2022
Sponsor:	400150 - GEF - Global Environment Facility	Currency:	USD	Reporting Period:	#ERROR
Other Reference:	4915-UG-PJ-FS-GR-01	Fund:	GF	Prepared on:	19.07.2022
Project	Project Description	Country	Region	Project Manager	Project Validity
140019	ENVIRONMENTALLY SOUND MANAGEMENT AND FINAL DISPOSAL OF PCBs AT THE RUSSIAN RAILROADS NETWORK AND OTHER PCB OWNERS (PHASE I)	Russia	Europe	Sergey Korotkov	20.01.2014 - 30.04.2022

	Description	Funds Available									
		Released Budget Current Year (a)	Obligations Current Year (b)	Disbursements Current Year (c)	Expenditures Current Year (d=b+c)	Total Agreement Budget (e)	Released Budget (f)	Obligations + Disbursements (g)	Funds Available* (h=f-g)	Support Cost (i)	Total Expenditures (j=g+i)
		USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
2900002567											
1100	Staff & Intern Consultants	13,554.03	(0.02)	0.00	(0.02)	204,409.24	204,409.24	250,855.19	13,554.05	0.00	250,855.19
1500	Local travel	6,397.94	0.01	0.00	0.01	193,935.22	193,935.22	187,537.29	6,397.93	0.00	187,537.29
1700	Nat Consult./Staff	14,132.57	1.28	4,123.01	4,124.29	2,953,050.34	2,953,050.34	2,943,042.06	10,008.28	0.00	2,943,042.06
2100	Contractual Services	2.92	(0.01)	0.00	(0.01)	2,317,894.07	2,317,894.07	2,317,881.14	2.93	0.00	2,317,881.14
3000	Train/Fellowship/Study	0.00	0.00	0.00	0.00	144,206.09	144,206.09	144,206.09	0.00	0.00	144,206.09
3500	International Meetings	0.00	0.00	0.00	0.00	4,999.03	4,999.03	4,999.03	0.00	0.00	4,999.03
4500	Equipment	(40.07)	(263,375.10)	263,462.98	87.88	1,331,360.79	1,331,360.79	1,331,488.74	(127.95)	0.00	1,331,488.74
5100	Other Direct Costs	(210.74)	0.00	(95.95)	(95.95)	190,165.22	190,165.22	190,280.01	(114.79)	0.00	190,280.01
9300	Support Cost IDC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	737,022.10	737,022.10
2000002567	USD Total	33,836.65	(263,373.84)	267,490.04	4,116.20	7,400,000.00	7,400,000.00	7,370,279.55	29,720.45	737,022.10	8,107,301.65

* Does not include Unapproved Obligations

The above statement has been certified electronically by the designated officials in UNIDO's department of finance.

Report Prepared on: 19.07.2022

Page 1 of 1

IX. Work Plan and Budget

1. Please provide an updated project work plan and budget for the remaining duration of the project, as per last approved project extension. Please expand/modify the table as needed.

Please fill in the below table or make a reference to a file, in case it is submitted as an annex to the report.

Outputs by Project Component	Year 1				Year 2				Year 3				GEF Grant Budget Available (US\$)
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Component 1 –													
Outcome 1:													
Output 1.1:													
Output 1.2:													
Component 2 –													
Outcome 2:													
Output 2.1:													
Output 2.2:													

X. Synergies

1. Synergies achieved:

Describe potential synergies arising out of UNIDO internal cooperation and/or cooperation with (external) bilateral and multilateral projects/programmes, if applicable.

3. Stories to be shared (Optional)

Please provide a brief summary of any especially interesting and impactful project results that are worth sharing with a larger audience, and/or investing communications time in. Please include links to any stories/videos available online.

EXPLANATORY NOTE

1. **Timing & duration:** Each report covers a twelve-month period, i.e. 1 July 2021 – 30 June 2022.
2. **Responsibility:** The responsibility for preparing the report lies with the project manager in consultation with the Division Chief and Director.
3. **Evaluation:** For the report to be used effectively as a tool for annual self-evaluation, project counterparts need to be fully involved. The (main) counterpart can provide any additional information considered essential, including a simple rating of project progress.
4. **Results-based management:** The annual project/programme progress reports are required by the RBM programme component focal points to obtain information on outcomes observed.

Global Environmental Objectives (GEOs) / Development Objectives (DOs) ratings	
Highly Satisfactory (HS)	Project is expected to achieve or exceed <u>all</u> its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as “good practice”.
Satisfactory (S)	Project is expected to <u>achieve most</u> of its <u>major</u> global environmental objectives, and yields satisfactory global environmental benefits, with only minor shortcomings.
Moderately Satisfactory (MS)	Project is expected to <u>achieve most</u> of its major <u>relevant</u> objectives but with either significant shortcomings or modes overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environmental benefits.
Moderately Unsatisfactory (MU)	Project is expected to achieve <u>some</u> of its major global environmental objectives with major shortcomings or is expected to <u>achieve only some</u> of its major global environmental objectives.
Unsatisfactory (U)	Project is expected <u>not</u> to achieve <u>most</u> of its major global environmental objectives or to yield any satisfactory global environmental benefits.
Highly Unsatisfactory (HU)	The project has failed to achieve, and is not expected to achieve, <u>any</u> of its major global environmental objectives with no worthwhile benefits.

Implementation Progress (IP)	
Highly Satisfactory (HS)	Implementation of <u>all</u> components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as “good practice”.
Satisfactory (S)	Implementation of <u>most</u> components is in substantial compliance with the original/formally revised plan except for only few that are subject to remedial action.
Moderately Satisfactory (MS)	Implementation of <u>some</u> components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.
Moderately Unsatisfactory (MU)	Implementation of <u>some</u> components is <u>not</u> in substantial compliance with the original/formally revised plan with most components requiring remedial action.
Unsatisfactory (U)	Implementation of <u>most</u> components is <u>not</u> in substantial compliance with the original/formally revised plan.
Highly Unsatisfactory (HU)	Implementation of <u>none</u> of the components is in substantial compliance with the original/formally revised plan.

Risk ratings	
Risk ratings will assess the overall risk of factors internal or external to the project which may affect implementation or prospects for achieving project objectives. Risk of projects should be rated on the following scale:	
High Risk (H)	There is a probability of greater than 75% that assumptions may fail to hold or materialize, and/or the project may face high risks.
Substantial Risk (S)	There is a probability of between 51% and 75% that assumptions may fail to hold or materialize, and/or the project may face substantial risks.
Moderate Risk (M)	There is a probability of between 26% and 50% that assumptions may fail to hold or materialize, and/or the project may face only moderate risk.
Low Risk (L)	There is a probability of up to 25% that assumptions may fail to hold or materialize, and/or the project may face only low risks.