UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

SUSTAINABLE DEVELOPMENT GOALS

Project Implementation Report

(1 July 2021 – 30 June 2022)

Project Title:	Environmentally Sound Management and Final Disposal of PCBs in India
GEF ID:	3775
UNIDO ID:	104044
GEF Replenishment Cycle:	GEF-4
Country(ies):	India.
Region:	SA - Southeast Asia
GEF Focal Area:	Chemicals and Waste (CW)
Integrated Approach Pilot (IAP) Programs[1]:	NA
Stand-alone / Child Project:	NA
Implementing Department/Division:	*ENV / IPM*
Co-Implementing Agency:	Directorate of Environment and Energy, Department of Environment, Industrial Pollution Mitigation Division
Executing Agency(ies):	Ministry of Environment, Forest and Climate Change (MOEFCC), GOI
Project Type:	Full-Sized Project (FSP)
Project Duration:	*60*
Extension(s):	*6*
GEF Project Financing:	USD 14,000,000
Agency Fee:	USD 1,445,000
Co-financing Amount:	USD 29,000,000
Date of CEO Endorsement/Approval:	12/30/2009
UNIDO Approval Date:	3/4/2010
Actual Implementation Start:	1/18/2010
Cumulative disbursement as of 30 June 2022:	USD 13,072,762
Mid-term Review (MTR) Date:	11/30/2014
Original Project Completion Date:	1/1/2015
Project Completion Date as reported in FY21:	12/31/2022
Current SAP Completion Date:	12/31/2022
Expected Project Completion Date:	12/31/2022
Expected Terminal Evaluation (TE) Date:	11/22/2022

[1] Only for **GEF-6 projects**, if applicable

Expected Financial Closure Date:	11/30/2023
UNIDO Project Manager[2]:	C.Centeno

I. Brief description of project and status overview

Project Objective
The overall objective of the project is to reduce and eliminate the use and releases of PCBs to the environment through promotion of measures to minimize exposures and risks by introducing environmentally sound management and disposal of PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes aiming at the final and virtual disposal of all PCBs inventory in India by 2025 and 2028, respectively. The project is aimed to i. Strengthen the legal and regulatory framework for environmentally sound management (ESM) and disposal of PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes; ii. Improve institutional capacity at all levels of PCBs disposal management; iii. Removal of 7,700 tonnes of PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes from targeted sites and transport them to disposal unit; and iv. Disposal of 7,700 tones PCBs, PCB-containing equipment and PCB-containing mineral oils and wastes in an environmentally sound manner. The objectives are being achieved through a combination of strategies, including legislative and regulatory assessment, capacity building, public education, technology transfer, technology dissemination, technical training and technical support.

Baseline
The major users of PCBs in the country are power generation units and state electricity boards. Currently there are no standard and established disposal practices for the out-of-operation PCB-containing equipment and wastes. There has been lack of understanding of specific legal and regulatory requirements to implement Stockholm Convention. No institutional capacity exists for ESM of PCB-containing equipment and wastes. There is lack of awareness of PCB risks, lack of dedicated environmentally sound maintenance capacity for PCB-containing equipment. GEF intervention would bring in the changes with regard to adoption/application of ESM and BAT/BEP in management and disposal of PCBs, PCB-containing equipment and wastes that poses a major public health and environmental threat; and will ensure the sustainability and replicability of its outputs, significantly increasing global benefits.

Please refer to the explanatory note at the end of the document and select corresponding ratings for the current reporting period, i.e. FY22. Please also provide a short justification for the selected ratings for FY22.

In view of the GEF Secretariat's intent to start following the ability of projects to adopt the concept of adaptive management[3], Agencies are expected to closely monitor changes that occur from year to year and demonstrate that they are not simply implementing plans but modifying them in response to developments and circumstances or understanding. In order to facilitate with this assessment, please introduce the ratings as reported in the previous reporting cycle, i.e. FY21, in the last column.

Overall Ratings[4]	**FY22**	**FY21**
Global Environmental Objectives **(GEOs)** / Development Objectives **(DOs)** Rating	Moderately Satisfactory (MS)	Moderately Satisfactory (MS)
PCB disposal activities with the mobile facility has been undertaken while installation and commissioning of the static facilities (Plasma and noncombustion facilities) have been hampered by regulatory/administrative requirements. Thus achievement of GEOs is rated MS.		
Implementation Progress **(IP)** Rating	Moderately Satisfactory (MS)	Moderately Satisfactory (MS)

[2] Person responsible for report content

[3] Adaptive management in the context of an intentional approach to decision-making and adjustments in response to new available information, evidence gathered from monitoring, evaluation or research, and experience acquired from implementation, to ensure that the goals of the activity are being reached efficiently

[4] 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

As the main remaining activity is PCB disposal and is occurring at relatively slow pace, implementation rating for both FY 21 and FY 22 is rated as MS.		
Overall **Risk** Rating	Moderate Risk (M)	High Risk (H)
For FY 21 reporting period, both implementation and achievement of GEOs were impacted by the COVID-19 pandemic and especially for India, the effect was massive. For this reporting period, the risk rating is considered moderate as the installation and commissioning of the facilities in Bhilai Steel Plant has resumed and should be completed by the last quarter of the year.		

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.

Please fill in the below table or make a reference to any supporting documents that may be submitted as annexes to this report.

Project Strategy	KPIs/Indicators	Baseline	Target level	Progress in FY22
Component 1 –				
Outcome 1: Strengthened policy and regulatory framework to comply with the obligations under the Stockholm Convention				
Output Strengthened policy and regulatory framework to comply with the obligations under the SC 1.1:	Existing national legal and regulatory framework evaluated. - Gaps between Stockholm Convention requirements and existing legal/regulatory framework - Legislative bodies presented with recommendations for new and/or revised laws to implement Stockholm Convention requirements; number of proposed new/revised laws. - Regulatory bodies presented with recommendations for new and/or revised regulations to implement Stockholm Convention requirements; number of proposed new/revised regulations. - Number of new/revised laws adopted relative to recommendations - State enforcement of PCB management related laws and regulations	Existing national legal and regulatory framework.	Existing National legal and regulatory framework assessed and reviewed	Expert recruited at PMC in MOEF&CC to work on the existing national legal and regulatory framework and to identify the gaps between Stockholm Convention requirements and existing legal/regulatory framework. Notification draft formulated and reviewed by CPCB still being negotiated/reviewed at government level. Guidelines as part of implementation of activity 1.4.2 i.e. Develop guidelines for management of PCB-containing equipment and wastes in consonance with ESM guidelines drafted and being reviewed at the PMU level to be a part of the Notification on PCBs Stakeholders and owners of largest stocks of PCBs contaminated oil and equipment have been trained.

	evaluated; number of states reviewed. - Number of states analysed, number of gaps identified. - Number of states assisted, person-weeks support provided, number of new measures adopted, amount of PCBs managed and disposed of in environmentally safe manner - Current PCB management practices evaluated - PCB management guidelines developed - Number of stakeholders and individuals trained			
Output 1.2: Legal and regulatory framework at the national level established or updated	-Number of new/revised laws adopted relative to recommendations - Number of new/ revised regulations adopted relative to recommendations	Existing hazardous waste management rule	New regulation recommended and adopted	Gazette Notification on PCB of the Government of India published and notified to all concerned /stakeholder's/PCBs owners in the country
Output 1.3: National legal and regulatory framework implemented in targeted states	- State enforcement of PCB management related laws and regulations evaluated; number of states and union territories reviewed. - Number of states and union territories analysed, number of gaps identified. - Number of states assisted, person-weeks support provided, number of new measures adopted, amount of PCBs managed and disposed of in environmentally safe manner	Existing hazardous waste management rule	PCBs owners at State level assisted and support provided.	Guidelines provided and owners provided training on the management of PCBs in ESM
Output 1.4: Pollution prevention and management of PCBs, PCB-containing equipment and waste in consonance with ESM guidelines	- Current PCB management practices evaluated - PCB management guidelines developed - Number of stakeholders and individuals trained	- Existing hazardous waste management rule	- Guidelines prepared - Training programmes organized	Guidelines provided and owners provided training on the management of PCBs in ESM
Component 2 –				
Outcome 2: Relevant institutions in India are enabled to manage PCBs in an environmentally sound manner as well as awareness raising on the adverse effects of PCBs				

Output 2.1: Institutional capacity for ESM of PCBs, PCB-containing equipment and wastes evaluated Output 2.2: Training workshops for key stakeholder undertaken Output 2.3 A national tracking and record keeping system (PCB inventory database) established and maintained countrywide (28 states and 7 union territories) Output 2.4 Sampling, analysis and monitoring capacity evaluated and strengthened in 13 states Output 2.5 Awareness raising carried out	- Number of stakeholders identified - Current stakeholder capacity evaluated - Stakeholder capacity building needs identified Workshop held on PCB phase-out and treatment methods; number of workshops and participants. - Number of individual trained - Information materials developed and provided to stakeholders. - Number of stakeholders contacted and provided with information and technical support - Amount of monitoring kits and other monitoring equipment/supplies provided - Completed power sector inventory list, number of items listed - Completed shipbreaking sector inventory list, number of items listed - Completed non-power sector inventory list, number of items listed. - New equipment purchased and installed - Standard methodology adopted - Number of articles published and estimated readership - Number of website hits and registered users - Number of PSAs developed and broadcast, estimated viewership - Number of workshops and workshop participants - Number of communications and consultations with policy makers.	Inventory of PCBs established during Enabling activity (EA) project	Stakeholders/owners of PCB oil, PCB contaminated oils, wastes and equipment identified and their capacity to handle PCBs in ESM manner evaluated. - Capacity building needs for treatment of pure PCBs and of PCB oil, PCB contaminated oil, wastes and equipment identified - Reporting material requirement provided to stakeholders - Inventory revalidated. Details of the items	- Owners of the largest holder of pure PCB identified viz. Steel Authority of India Limited/ Bhilai Steel Plant, Nyveli Lignite Corporation, power utilities, etc. - Secured co-financing to manage PCBs in ESM. - Requirement of the institution for management of PCBs identified and assessed. - Identified and labelled 523 Nos. of transformers with 1235 tonnes of sovtol/clophen oil. Detailed data with volumetric dimensions of each of the transformer recorded and inventoried. Additionally, 603 PCBs filled/contaminated transformers have been located and identified during inventory update. - PCB contaminated stocks (500 tonnes) identified at Neyveli Lignite Corporation has been confirmed by CPRI team. - Other major owners, identified by CPRI, showed interest for getting their stocks treated using mobile facility include: • Tarapur Atomic Power plant—100MT • Chandrapur Thermal Power Station—100MT • Transmission Corporation of Andhra Pradesh Limited, Vijayawada----39MT, • Pinki Thermal Power station, UP------- 5 KL • Gandhi Nagar Thermal Power Station, Gujarat --- 60 KL • Rajasthan Rajaya Vidyut Prasaran Nigam Ltd. Rajasthan ---100 KL - Central Power Research Institute (CPRI) was sub-contracted to implement the project activities. - Core team at the CPRI identified and are in place. - Sixty-eight training workshops organized in different states such as, Assam, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Gujarat, Uttar Pradesh, Uttrakhand, Delhi, Haryana, Maharashtra, Orissa, etc. In each of the workshops conducted around 100-125 senior level officials, engineers, policy makers, researchers, PCBs owners, etc. handling PCBs contaminated oil and equipment trained on the management of PCBs. Training material prepared and provided to the stakeholders who are one the largest owners of the PCBs contaminated oil and equipment. Safety Guidance Manual drafted and finalized. - PCB analysis in oil samples numbering 780 received at CPRI undertaken. - Owners of the largest holder of low concentration PCBs identified namely NLC in Tamil Nadu. - Inventory of pure PCBs and low conc. PCBs being updated and revalidated. 400 tonnes of pure PCBs and 600 tonnes of low contamination (0-500 ppm) PCBs inventory added up and updated. - Total number of transformers containing pure PCBs are 1180 with 2511 tonnes of pure PCBs. With three washing during treatment the total amount would become 7533 tonnes. - Total tonnage of PCB contaminated oil (10-500 ppm) is 3500 tonnes.

				- PCB contaminated stocks identified at Neyveli Lignite Corporation and Bhusawal thermal power station have been validated by CPRI team. - Roadmap for treatment of low concentration PCBs using mobile facility finalised. - After commissioning and steady state operation, 21.4 KL PCBs contaminated stocks of TNEB has been decontaminated successfully followed by a 25 KL stock of low level PCBs at VISL- Bhadravati as per the roadmap finalized by CPRI, the operating entity. - A total of 122.26 KL low level PCBs contaminated oil treated using mobile de-chlorination unit at owner's sites in north Indian state UP. - So far 384.58 MT of PCBs contaminated oil have been decontaminated successfully using the mobile de-chlorination unit.
Component 3 –				
Outcome 3: Targeted regional implementation for ESM of PCBs, PCB-containing equipment and waste				
Output 3.1: Dedicated environmentally sound maintenance capacity for PCBs, PCB-containing equipment and wastes established	Identification of technical and technological need to implement ESM for PCB containing equipment - Number of PCB Management facilities certified - Facility supplied with necessary equipment		- Technical and technological requirement assessed and identified. - Necessary equipment identified, assessed and contract issued	- Based on the inventory and location of the stocks of PCBs, technical and technological requirements identified at Bhilai Steel Plant. - CPRI identified the technical and technological requirements for safe decontamination of PCBs contaminated oil at different locations in the country namely at Nyveli Lignite Corporation and other locations in Maharashtra, Tamil Nadu, Karnataka, Kerala, Gujarat, Assam, etc. - Competitive global bidding identified the suitable technology for the treatment of the PCB oil, PCB contaminated oil , wastes and equipment. - Selection process involved two times bidding. - In the first bidding process, a party was selected on technical bid basis but commercial (financial) bid did not succeed due to high cost of bid which far exceeded the funds available to the project. - For the second bidding, TOR was prepared splitting the job into 2 parts - Supply A (disposal of pure PCBs) and Supply B (treatment of PCB contaminated oil, wastes and equipment). - Tender evaluation process conducted by the Technical Working Group (TWG) and UNIDO approved tender for Supply B (treatment of PCB contaminated oil, wastes and equipment). - The identified technology has been ordered to the selected vendor for commissioning at the site at Bhilai Steel Plant. - M/s Ramky, the Contractor, filed the application for permit clearance with the state authority in Chhattisgarh State. The application was taken up in the Expert Group meeting and after studying and analysing the scope of the work, the Committee directed the BSP and M/s Ramky to approach the Central Authority in Delhi. - Application along with many documents prepared as per the requirement under the Law and submitted to the Central Authority of the Government of India (GOI).

				- 122nd Meeting of the Expert Appraisal Committee for Building/Construction Projects/Township and Area Development Projects, Coastal Regulation Zone, Infrastructure Development and Miscellaneous projects under the Central Authority of the GOI cleared the EIA. - Standards for monitoring of the effluents being followed in different countries are being studied to be adopted in India. - Two applications prepared, one under Air Act and other under Water Act, for submission with the State Regulatory authority - Application dossier for second stage of clearance (CFE) and No Objection from the State authorities submitted. - On scrutiny by the Expert Group, Board sought additional information, documents and clarifications (19 in numbers). Actions taken by BSP and M/s Ramky to compile the information and prepared the required additional documents / information. - Third level (stage) of clearance from the Central Government from the Ministry of Industry completed. - Final level of clearance i.e. Consent for Establishment for the static facility obtained and approval letter issued to the BSP by the State Pollution Control authorities in Chhattisgarh. - Site inspection, another requirement under the permit, by the State authority completed. - Civil drawing, electrical drawings, furniture, fixtures requirements discussed in number of meetings held with BSP/CET/ SAIL, the operating entity and M/s Ramky, the Contractor and finalised. - TS for the civil work was revised to make two separate activities viz. Civil work for the static facility and replacement of 523 pure PCBs transformers with new ones. Accordingly, two different TS were made to two different activities by BSP. This was essentially done to fast track approval of the civil work by the management of the BSP/SAIL. - TS for geo-technical survey and assessment of the site drafted, discussed and finalised. Tenders floated. - Geo-technical survey of the site completed and report submitted by the Contractor engaged by BSP to the management of BSP. - Phase out plan of the transformers drafted and discussed with CET, SAIL and BSP, the operating entity and the PCBs owner. - Phase out plan of 523 PCB transformers has been delinked from civil work of the facility. Revised plan is being worked out. - TOR on Specification for the provision of a destruction system for high level or pure PCB liquid wastes and decontamination of porous material contaminated with PCBs finalized and published for competitive global bidding. Bids, both technical and commercial, evaluated to finalise the contract. Contract for the facility for destruction of pure PCBs and porous material (Part A facility) issued to M/s Ramky . - CFE application for Part A facility, under Air Act and Water Act has been submitted to the Chhattisgarh Environment Conservation Board (CECB), Raipur, Chhattisgarh. The application has been submitted along with Pre-feasibility report of the Part A facility and other documents together with the required fee of INR 160,000. - Revised TS for civil work for housing both the facilities of PCB treatment and destruction i.e.

				Part A and part B finalised by BSP/SAIL/CET in consultation with M/s Ramky. - PAG approval of the project at Corporate level of SAIL by BSP obtained. - TOR for the mobile facility drafted. - TWG and CPRI endorsed the TOR. - Approval of the MOEF, GOI obtained on the TOR. - TOR for mobile facility forwarded to UNIDO HQs. Vienna for further processing for issuance of RFP. - TOR on Specification for the provision of a de-chlorination system for treatment of transformer mineral oil containing PCBs and PCB disposal finalized and published for competitive global bidding. Bids for the mobile de-chlorination system, both technical and commercial, evaluated to finalise the contract. - Tenders (Request for Proposal) for civil work for the facility supply A and B at Bhilai Steel Plant posted and tenders invited. - Six vendors globally sent their proposal for consideration in response to the RFP - SAIL/BSP did the technical evaluation - SAIL/BSP conducted commercial evaluation and negotiated with the selected vendor. The financial proposal was sent to the SAIL corporate office for the approval of SAIL Board. - The proposal was examined and vetted by the sub-committee of the SAIL Board. - The proposal was then reviewed and endorsed, after due clarifications from the BSP, by Director (Technical), Director (Project) and Director (Finance). - The proposal after three tier of scrutiny was put up for approval of the Chairman, SAIL. - Approval of the Chairman accorded. - Letter of intent (LOI) issued by BSP to the selected vendor M/s HSCL for the civil job for the static facility at BSP on July 11, 2016 - M/s Ramky kept informed on the development and advised to undertake their part of the implementation of commissioning the plant concurrently. - CPRI updated inventory of PCBs, both contaminated and pure covering 157 organizations across the country. - Organised four PCBs owners training programmes at various locations in different region of the country during the year. - Organised sixty PCBs awareness programme on PCBs across the country. - Out of 780 PCBs containing oil samples collected/received at CPRI, 564 samples have been analysed during the year. - Training brochure/hand outs in 11 regional languages published and circulated to the stakeholders/technician/workers handling PCBs - UNIDO entered into a contract with M/s NPO Dekanter for the supply of a mobile de-chlorination system for the treatment of the low concentration PCB contaminated oil. - TOR for the provision of the management services for the treatment of transformer mineral oil containing PCBs using the mobile PCB de-chlorination system drafted and provided to the executing partner for their review. - CPRI management endorsed the TOR - UNIDO procurement service unit invited proposal from CPRI for providing the management services for the treatment of transformer mineral oil containing PCBs using the mobile PCB de-chlorination system.

				- GPS tracking system is in place on the mobile unit truck for proper monitoring the movement of mobile facility and decontamination process onsite. - GPS tracking system developed to install on the mobile treatment facility. - PCB inventory updated. Additionally, 603 PCBs filled/contaminated transformers have been located and identified during inventory updating. 400 tonnes of pure PCBs and 600 tonnes of low contamination (0-500 ppm) PCBs inventory added up and updated. - During the reporting period, 5 MT of pure PCBs and 350 MT of lower level PCBs inventory have been added up and updated.
Component 4 :				
Outcome 4 : Outcome 4: Regional capability for final treatment and disposal of PCBs, PCB-containing equipment and wastes				
Outcome 4.1 Management system for identification, tracking, collection, packaging, transport, interim storage, record keeping, and disposal of PCBs, PCB-containing equipment and waste developed and operational in 13 states Output 4.2: ESM and transport to interim storage sites of PCB-containing materials carried out including specialized transport vehicles for highly concentrated PCBs with GPS and adequate preparedness measures in case of emergency on transport routes to the stationary disposal unit Output 4.3: Final ESM treatment of at least 7,700 tons of PCBs, PCB-containing equipment and PCB-contaminated oil and wastes undertaken	- Guidelines developed for PCB waste identification, tracking and record keeping - Guidelines developed for PCB waste collection, packaging and transportation - Guidelines developed for PCB waste interim storage - Guidelines developed for PCB waste disposal information management software developed for PCB management system - Number of stakeholders and individuals trained in guidelines and management system - Number of ESM storage facilities established - Locations identified for ESM interim storage facilities - Number of ESM interim storage facilities established - Number of staff hired and trained - Number of treatment facilities established - Technology selected and equipment procured - Number of treatment facility locations identified - Number of treatment facility designed, technologies identified and selected	Data on PCBs storage sites, owners details available in identified states	- Guidelines drafted and developed for PCBs, PCB-containing equipment and waste identification, tracking and record keeping - Guidelines drafted and developed for PCBs, PCB-containing equipment and waste collection, packaging and transportation - Guidelines drafted and developed for PCBs, PCB-containing equipment and waste interim storage - Guidelines drafted and developed for PCBs, PCB-containing equipment and waste disposal - Treatment facility is being established - One (1) stationary technology identified and selected, equipment procured - Location of the stationary treatment facility identified treatment facility designed	- Data collected from different sources viz. literature, government sources, etc. - Data collated and compared with the international standards. - Draft guidelines prepared and discussed. - Copies of the four guidelines prepared provided to the government for their review and comments. - Government (MOEF&CC) in turn forwarded those to the stakeholders for their comments and inputs. - Guidelines reviewed by the stakeholders namely CPCB and CPRI. The PMC also scrutinised the Guidelines which are being addressed at the government (MOEF&CC) level. - CPRI adopted the guidelines, got printed and circulated/ distributed to the PCBs owners. - Sixty-eight training workshops organized for stakeholders/owner of the PCBs and guideline distributed to over 2000 persons and a large number of organizations dealing in PCBs. - SAIL agreed to put up PCB destruction facility at Bhilai Steel Plant (BSP) of Steel Authority of India Ltd. (SAIL). - Approval of the Board of Directors of SAIL on the co-financing the setting up of facility at Bhilai Steel Plant completed and obtained. - Completed the Inventory of pure PCBs containing transformers at Bhilai Steel Plant. - A total of 1235 Tonnes of pure PCBs has been estimated from 523 transformers commissioned at Bhilai Steel Plant. 200 drums of 200 l each of sovtol, totalling about 60 tonnes as stockpiles, have also been identified. - Labelling of all transformers have been completed. Location, rating and other details of each of the transformer to be treated have been completed. - Site measuring 12000 square metres, for commissioning of the PCB destruction facility at Bhilai Steel Plant has been finalized. Approval process completed. - SAIL has identified the team of officers for operating the facility. Work has been started by the senior officers of the BSP/SAIL for implementing the activities. - Technology Workshop conducted to assess the available technologies for the safe disposal of PCBs in an Environmentally Sound Manner. - Global tenders floated for putting up the static facility for the disposal of the PCBs. - Technical Working Group (TWG) evaluated the technical and commercial bids.

	- Number of treatment facilities commissioned - Number of staff trained - Number and amount of PCB contaminated material treated or disposed of - 7,700 tonnes for PCBs, PCB-containing equipment and waste identification, tracking and record keeping.			- Non-combustion sodium based technology has been selected for putting up the facility at the Bhilai Steel Plant. - UNIDO issued the contract to the winning party. - The contractor visited the site at Bhilai Steel Plant and had discussion with the senior management of the Bhilai Steel plant on the implementation of the contract of commissioning of the facility. - Pre-feasibility report of the facility at Bhilai Steel Plant prepared. - Data collected for the Environmental Clearance for the Form 1 as per MOEF Notification No. S.O. 1533 dated 14th September 2006. - Application for Environment Clearance submitted to the State Level Expert Appraisal Committee Chhattisgarh, Chhattisgarh Environmental Conservation Board by Bhilai Steel Plant/SAIL. - Technical specifications for the survey work of the site prepared by CET/SAIL and submitted to BSP. - FR prepared by CET/SAIL and submitted to BSP. - SLD for sub-station prepared by CET/SAIL shared with the contractor. The contractor has been advised to select electrical equipment accordingly and submit detailed engineering drawing and specifications for approval. - Based on the recommendations of the Technical Working Group, manufacturer of the Plasma Technology had been approached. - Arranged a study tour for Indian experts to visit the facility of the Plascon (Technology provider of Plasma based PCBs destruction) at Brisbane, Australia. - Arranged a study tour in October 2012 for Indian experts to the JESCO Kitakyushu facility in Japan to further study and assess the plasma technology for the treatment & disposal of pure PCB. - TOR drafted for the supply of the destruction facility for pure PCBs. - Draft TOR circulated to all Technical Working Group (TWG) members for their review and comments. - TWG meeting convened to discuss the TOR. - TWG members suggested to include the provision of treatment/disposal of the porous and other materials including wood to have complete package in one go. - TOR revised accordingly. - The TWG meeting discussed in details the revised TOR para by para and suggested various changes to improve the TOR. The meeting also noted the observation of the BSP that it would not be possible to get the clearance for putting up an incineration facility at the BSP. Hence, TWG decided that option of incineration technology should not be included in the tender TOR. - Chairman TWG sought second opinion on the destruction technologies (especially Plasma technology) from the expert institutions in India - Following the receipt of approval of MOEF/TWG on the TOR on Specification for the provision of a destruction system for high level or pure PCB liquid wastes and decontamination of porous material contaminated with PCBs, the UNIDO has finalized the TOR and published for competitive global bidding.

				- Queries of the bidders have been responded three times. - Bids have been received by the Contract Unit. - Evaluation of the bids, both technical and commercial completed. Successfully negotiated with the vendor to bring down the offered price of the Plasma facility from US$5.8 million to US $4.24 million. - Contract for the Plasma facility for disposal of pure PCBs awarded to M/s Ramky Enviro Engineers. - TOR for the mobile facility for decontamination of low concentration of PCBs oil drafted. - Endorsement TWG/ MOEF, GOI on the TOR for mobile facility obtained. - RFP finalised by the Procurement Unit at UNIDO Vienna - RFP posted on UNIDO portal for global bidding. - Technical Working Group (TWG) evaluated the technical and commercial bids. - Technical working group finalized the offer based on bids evaluated. - Three facilities being commissioned under the project viz. Stationary facility for Disposal of pure PCBs using plasma technology at Bhilai Steel Plant, Bhilai Chhattisgarh operated by Bhilai Steel Plant of SAIL; Stationary facility for the treatment of PCB oil, equipment and wastes using de-chlorination technology at Bhilai Steel Plant, Bhilai Chhattisgarh operated by Bhilai Steel Plant of SAIL ; and a de-chlorination treatment facility on mobile platform for treatment of low level contamination of PCBs will be operated by CPRI. - Consent for Establishment of Plasma facility (Supply of the Static plant at BSP) approved and issued by competent authorities in Chhattisgarh - Order placed with M/s NPO Dekanter for the supply of the mobile de-chlorination system - Order placed with M/s Vinformax with whom CPRI has a contract for developing a software for a GPS embedded tracking system for monitoring the movement and decontamination schedule of mobile facility, - 28 sites inspected for undertaking decontamination activities using mobile facility - Interim storage facility at different locations identified and are being utilised to store the transformers and PCB contaminated oil for the treatment using the mobile facility. - CPRI agreed to host the management and operation of the mobile de-chlorination system - Proposal for the management services for the treatment of transformer mineral oil containing PCBs using the mobile PCB de-chlorination system invited from CPRI. - Civil construction of the static facility both for Supply A (Plasma system) and Supply B (de-chlorination system) – order placed following the competitive bidding procedure followed by BSP/SAIL - Timelines for the civil construction and commissioning of the static facility both for Supply A (Plasma system) and Supply B (de-chlorination system) worked out by the PSC meeting organised at MOEF&CC. - Stakeholders trained in the PCBs management following the guidelines developed by CPRI - CPRI demonstrated the procedure of the draining of the oil and dismantling of the transformer for PCB decontamination to the stakeholders

				- Schedule of the treatment of PCBs contaminated oil using mobile de-chlorination system finalised by CPRI. - Desktop , Printer and hardware of GPS required for GPS tracking of de-chlorination technology are delivered to CPRI by Vinformax - Approval of Chairman SAIL on the finance of the civil building contract obtained - BSP awarded the contract to M/s HSCL for the civil building construction for the static facility - Civil work started at site in Bhilai on 27 ctober 2016 - \clearance completed - Design and engineering – completed -Boundary wall of the plant done -Main building for both the plants – Construction work for main building is completed. -Construction of water tank to be completed. -Storage tank foundations completed -Waste storage – columns completed. -Sodium metal storage building – RCC frame structurally completed. Doors to be fixed. -Installation of EOT cranes (2 No.) are completed. -Installation of Electric maintenance hoist is completed. -Order placed for Tyre Mounted Mobile Crane. Fork Lift (Capacity - 5.5 T) is delivered at site. -Main equipment building for both the plants – All the structure work completed. All the civil work with HDPE Lining and RCC Flooring completed. -Storage tank foundations completed. -Waste storage and temporary waste storage shed work completed -Sodium metal storage building completed. -Trench work for storm water has also been completed. -Roads and road lighting work is in progress. -Transformer yard for CSPDCL power supply completed. -Construction of 33 kV single circuit overhead lines by Chhattisgarh State Power Distribution Co. (CSPDCL) from nearest 33 KV substation to the site of static facility- completed. -Installation and commissioning of de-chlorination system and ITD facility – completed -EOT Cranes are erected properly. -Fire hydrant pipeline, sewage water pipeline erection work in progress. -Fork lift been delivered at the site. -PROCESS TANKS 1R01, 1H02, 1H03, 2A01, 2A02, 7H01,7H02,7H03,7H04,7H05,6H01,6H02,6H03, 6H04,6KL,2H01,1H04,0.9KL-2NOS, 4F01-4NOS,0.5 KL,4E01-2NOS,7E0-1,1H03, 1H02, 20KLHSD, 5H01, 5H02,5H03.TOTAL =33 – Erection of all tanks are completed. Fabrication of related pipe lines are also completed. -Installation of 33KV sub-station is completed. -Lab Equipment Hot Air Oven - Installed Digital Water Bath - Installed Hot Plates - Installed Low Temperature Cabinet - Installed PM Sampler - Received Dust Sampler - Received Ventilations (4 Nos) ready for dispatch Gas Chromatography (GC) - Installed Cooling Tower – Erection and fabrication of pipe lines completed

				-Centrifugal Pumps (12 Nos) – Installation and fabrication of pipe lines completed. -Gear Pumps (12 Nos) – Installation and fabrication of pipe lines completed. -Oil Regeneration Units (2 Nos) - Installation and fabrication of pipe lines completed. -Oil Flooded Screw Air Compressor (2 No) - Installation and fabrication of pipe lines completed. -Air Dryers (2 Nos) - Installation and fabrication of pipe lines completed. -Air Receiver Tanks (2 Nos) - Installation and fabrication of pipe lines completed. -Water Cooled Chillers (2 Nos) - Installation and fabrication of pipe lines completed. -For Plasma system the following equipment have been installed. -Installation of MEE equipment are completed. - Vapour Separator-1 - Vapour Separator-2 - Pre Heater-1 - Pre Heater-2 - Calandria-1 - Calandria-2 - Condenser - ATFD - Agitator for Feed Tank - Feed Strainer - Seal Pot - Seal Water Tanks-2 Nos - ATFD Feed Balance Tank - Air Blower - ATFD Condenser - Seal Water Tank - Steam Condensate Tank - Gas Storage Tanks - Argon Tank - Atmospheric Vaporizer-2nos - Oxygen Tank - I.T.D Equipment - Fuel Oil Tank - Oil Receiver - Carbon Bed Chamber - Burner Assembly - Instruments - Level Indicator - Temperature Indicator - - 600 Kg/Hr Boiler (2 Nos) – Installed. - Chimney installed and erected. - Plascon Unit – Erected. Fabrication of related pipe lines are also completed. -Thus, all equipment erection completed. -Mobile de-chlorination plant and Sodium Dispersion unit delivered at CPRI, Bangalore -Step down transformers both for mobile de-chlorination unit and sodium dispersion unit have been procured and installed for smooth functioning of both units at CPRI. - -Mobile de-chlorination System and the Sodium Dispersion Production System have been fully commissioned. -Trial run successfully completed -Steady state operation of both units have been achieved -Operators (a team of 8 staff) have been imparted extensive training on the operation of both the units by the vendor on site at CPRI, Bangalore. On successful completion of the training, the operators have started operating both system independently.

				-After successful commissioning of unit, the de-chlorination system has been installed on the trailer so as to make use of the unit as fully mobile system to be operated at site at different locations across the country for de-chlorination of low level of PCB contaminated oil and wastes. -The mobile de-chlorination system and Sodium Dispersion Production System have been handed over to the CPRI by the vendor namely, NPO Dekanter. -25 Kl stock of low level PCBs at VISL-Bhadravati and 21.4 MT stocks at TNEB have been decontaminated at site as per the roadmap finalized by CPRI, the operating entity. -So far 112.4 MT of PCB contaminated oil has been decontaminated successfully using the mobile de-chlorination unit. -762 oil samples collected from the following 11 organizations/PCBs owners and tested. -CPRI conducted 4 awareness programmes to train 154 engineers and technicians handling PCBs containing equipment. -A total of 34.6 KL low level PCBs contaminated oil treated using mobile de-chlorination unit at owner's sites in north Indian state UP. -chlorination of 68Kl of PCBs contaminated oil. <u>Under the reporting period, the following are the progress as on date:</u> <u>-</u> Owners of the largest holders of PCB contaminated oil have been identified and the status of the treatment are as follows; 1 M/s. Neyveli Lignite Corporation ---500MT 2.Tarapur Atomic Power plant 20.95MT— Completed 3.Chandrapur Thermal Power Station— 129MT completed 4.Chandrapur Thermal Power Station -355Kl – awaiting for order 5.Transmission Corporation of Andhra Pradesh Limited, Vijayawada---39MT, 6. Pinki Thermal Power station, UP-55KL--order received 7 Gandhi Nagar Thermal Power Station, Gujarat - 60Kl--order received 8. Rajasthan Rajya Vidyut Prasaran Nigam Ltd. Rajasthan -100 Kl - awaiting for order - awareness training programmes: three training organised in Kerala, West Bengal and Uttar Pradesh - Participant at M/s. KSEB Nallalam, Kerala were given training on "condition monitoring of transformer by oil analysis and safe handling of PCB contaminated power transformers" - As on 30th June 2020 a total of 384.58 MT of PCB contaminated oil had been dechlorinated using mobile de-chlorination plant at owner's sites located in different parts of the country. - PCB Analysis : 300 oil samples received at CPRI for the analysis of PCB. Analysis completed. <u>Static plant at BSP</u> -Erection & commissioning of the static PCB plant consisting of plasma system, de-chlorination treatment plant, ITD, MEE, are at advance stage of completion. -PLASMA System: Plascon System imported from Australia, all equipment reached at site and erected on base platform. Installation team

				from Australia will be called on completion of utilities (power, water) connection and supply by BSP and after the COVID 19 lockdown is lifted by GOI. -ITD System: Installation completed. -Process Equipment: Foundations work completed at site as per design. Equipment erection completed on 12 March 2020. -MEE and Utilities: MEE & ATFD equipment reached to site and erection completed. Cooling tower received at site and erection completed. Boiler and water softener reached site and erection completed. Chiller unit erected. -Pipes and valves: Pipes & fittings reached site and all major piping works completed, except the utility lines from BSP. -Oxygen and Argon Tanks: Equipment dispatched to site and erection works completed. -Pumps: All pumps erection work completed and piping connection completed. -Oil filtration and regeneration unit: Equipment received and placed in exact location, installation completed. Commissioning to be done along with other plant commissioning. -Painting and insulation of equipment's and pipes: Painting and insulation work will start after hydraulic testing of pipe lines. - Electrical -1600 KVA Transformer : Transformer installation completed. -HT yard: All works completed; transformer charging done power connection successfully given to panel. -PCC Panel & APFC Panel: Panels reached site and erection work completed -MCC Panel: MCC panel erection completed at site. -Electrical cables and cable trays: Cable tray, cable laying and connection work completed -Local push buttons: Push buttons reached site, erection completed Instrumentation & other: -Field Instruments: 75% of instruments installed in filed pipelines. -PLC Panel: Panel reached site and placed in location. -CCOE explosive license for Oxygen and Argon: Explosive license drawing approved. Town planning permission obtained by BSP. Applied for final approval . -As BSP received building permission from corporation NOC for Diesel storage tank applied to district collectorate, after that application to be submitted to Petroleum and Explosive Safety Organisation Nagpur. -Safety manual: Submitted to BSP. -Training manual prepared and provided to BSP.- - Lab equipment: BARC approval received for GC ECD and equipment commissioning completed <u>Under the reporting period following are the progress as on date</u>: **Statutory Compliances:** - Consent to Operate (CTO) for both Part A & Part B of project obtained from Chhattisgarh Environment Conservation Board (CECB) on 19th January, 2022.

				- License for storage & handling of Oxygen, Argon granted by Petroleum and Explosive Safety Organization (PESO) on 07 June 2022. - Authorization for Hazardous Waste handling granted by Chhattisgarh Environment Conservation Board (CECB) on 05th July, 2022. - License for storage & handling of diesel by Petroleum and Explosive Safety Organization (PESO) is in process, likely to be issued by 10 August 2022. **Destruction of Pure PCBs and Decontamination of Porous material (Part A) Project:** **- Indirect Thermal Desorption (ITD) System -** All the equipment installed, leakage testing of tanks, fabricated pipe lines completed. Pre-commissioning of ITD system completed on 31st March 2022. **- Multiple Effect Evaporator (MEE) System –** Testing of all pumps and rotary equipment completed. Leakage / pressure testing of tanks, surface condensers, Calandrias and other equipment completed. Pre-commissioning of MEE system had been completed on 19th May 2022. **- Plascon System –** System erected on concrete bed. System connected pipe lines for argon oxygen and PCB fabricated and tested. Final commissioning will be done in presence of foreign experts. **- Boiler-** Both the boilers (Capacity – 600 Kg/Hour) and connected 30 Meter stack erected, connections completed on 2nd July 2021. _ Both the boilers commissioned on 4th April, 2022. **- Decontamination of High / Low Level PCB oil (Part B) Systems:** - All the Process tanks, storage tanks and other connected systems installed, systemization completed. Testing of pumps & other rotary equipment completed. **- Air Compressors & Air Driers -** Both the compressors & driers commissioned on 5th July 2021. **- Chillers-** Both the chillers commissioned on 27th May 2022. **- Oil de-gasifier & Oil Re-generation units** – Erection completed pressure testing with water done. **- Sodium Dispersion Solution Preparation System-** Erection and pressure testing done. **- De-Chlorination Process chamber**- erection and pressure testing done. **- Lab Instrument**- All the lab instruments installed and tested. The GC ECD instrument was commissioned but now the quantification of PCB oil concentration is not working. OES contacted to rectify the fault - All panting and insulation work completed. **Other activities:**

				- Instrumentation Work-Installation, testing of all instruments completed. - Classroom training had been given to BSP operational team on 4th January 2022. - All the raw materials for commissioning received at site. - Two no of PCB oil filled transformers have been transferred to PCB site from Bhillai Steel Plant on 27th June 2022. PCB oil drained out from transformer and stored in designated tank. Decontamination works are in progress.
Component 5 :				
Outcome 5 : Outcome 5: Project Management and monitoring and evaluation				
Output 5.1 Project management structure established	- Establishment of PMU and appointment of Project Leader - Establishment of PSC - Recruitment of project experts/Advisor		- PMU established and Project leader designated - PSC established - Project experts/Advisor appointed	PMU established at the start of the project. PSC established at the start of the project. Project staff /Advisor appointed and are in position
Output 5.2 An M&E mechanism designed and implemented according to GEF M&E procedures	- Organisation of Inception workshop - Preparation of Annual Project Implementation reports Holding Tripartite Review Meetings - Mid-term evaluation of the project		- Inception workshop organised - Annual Project -- Implementation reports prepared _ Review meeting organised - Mid-term evaluation undertaken	

III. Project Risk Management

1. Please indicate the <u>overall project-level risks and the related risk management measures</u>: (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 <u>sub-optimally</u> rated <u>(H, S) in the previous reporting cycle.</u>

	(i) Risks at CEO stage	(i) Risk level FY 21	(i) Risk level FY 22	(i) Mitigation measures	(ii) Progress to-date	New defined risk[5]
1	Law-making and regulatory bodies at state and union territories level will not timely be responsive	Low Risk (L)	Low Risk (L)	Ensure recommended laws and regulations are practical and enforceable; stakeholders will be included in the development process; institutional capacity building and training will be provided	Gazette Notification on PCB of the Government of India published and notified	☐
2	Low level of participation and support of key stakeholders for the	Low Risk (L)	Low Risk (L)	Establishment of inter-sector National Steering Committee representing all relevant stakeholders	A TWG and inter sector National Steering Committee representing all relevant stakeholders were established	☐

[5] New risk added in reporting period. Check only if applicable.

	implementation of the project.					
3	Potential transformer owners are not containing equipment and wastes.forthcoming to identify target transformers and to report PCBs, PCB-	Low Risk (L)	Low Risk (L)	Identification of conflicting stakeholder interests through involvement of stakeholders in the project design process		☐
4	Type of technologies selected does not meet the SC requirements on BAT and BEP. Serious threats to human health and the environment due to releases of PCBs during the removal, transport and treatment of PCBs, PCB containing equipment & waste.	Low Risk (L)	Low Risk (L)	Establishing close links to the NIP project (Updates of inventories). Technical Workshops with technology providers and users as a preventive risk mitigation measures. Carrying out of environmental impact assessment studies for the removal, transport and treatment of PCBs, PCB-containing equipment & wastes. Development and implementation of environment management plans to mitigate possible risks.	Organized series of awareness raising workshops and owner's training programmes to interact with them to resolve the issues of conflict. Sixty workshops organized with the stakeholders/owners of PCBs.	☐
5	Delay in project implementations as well as monitoring and evaluation may cause delays in holding regular project management and M&E meetings and issuing required reports	Low Risk (L)	Low Risk (L)	Proper communication channels are Established	PMU at MOEF&CC have strengthened through dedicated manpower.	☐
6	Delay in project implementation activities at project site due to COVID-19 pandemic	Low Risk (L)	Low Risk (L)		Stakeholders have been informed and are agreed in the present crisis of COVID 19 pandemic	

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.

Coordination with the Ministry of Environment, Forest and Climate Change has been strengthened. Stakeholders are informed and progress regularly monitored with the support of the Ministry.

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

The major implication of the COVID-19 pandemic is the complete halt of the activities both at installation/commissioning of the static plant at Bhilai Steel Plant and operation of the mobile de-chlorination plant for treatment of low-level PCBs at owner's site. This has caused inordinate delay due to complete lockdown in the country twice from March 2020 to October 2020 and again from April 2021 to Mid-June 2021 resulting in no reporting for work at site by the technicians, labours, etc. as per the directions/orders of the State Government as well as Central Government of India. As a result of this, the project has suffered badly resulting in unforeseen delays in the implementation of the activities. While conditions in the country is returning to normalcy, some services required for project implementation are not available resulting to delays in delivery of outputs.

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

The completion of the installation and commissioning of the PCB treatment facilities in Bhilai (Plasma and dechlorination) is quite complex and has met several challenges as reported in previous reporting periods.

The project is part of the PCB Thematic Evaluation of UNIDO but is expected to be completed on 31 December 2022.

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

NA

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).

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

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).

All stakeholders are fully involved in the implementation of the project activities with sole aim to treat and dispose of PCBs in environmentally sound manner.

Bhilai Steel Plant of the Steel Authority of India Limited and Central Power Research Institute are the main stakeholders of the project. They are associated with the execution of the project activities right from the beginning of the project. Director General CPRI acted as Chairman of TWG and conducted meetings including evaluation of the global bidding for the supply of the facilities for Static de-chlorination plant, plasma plant and the Mobile de-chlorination plant.

Static plant installation including de-chlorination plant, Plasma unit and the indirect thermal desorption unit are at the advance stage of installation/commissioning. The civil work of the facility is completed.

The mobile de-chlorination system and the Sodium dispersion system have been fully commissioned and operational. The CPRI has taken over the responsibility to operate the system to meet the target of treating 750 tonnes of PCB contaminated oil at different

locations across country.

One of the major challenges is to convince the owner of the PCBs to come forward for the safe disposal of their stocks through the facilities put up under the project. However, the biggest challenge faced by stakeholders is to arrange for huge sum of funds for the treatment of large quantities of contaminated oils and cost for the replacement with new fresh oil. The project partner CPRI is encouraging owners of the PCBs stock owners to come forward and get their material treated at subsidised rates utilising the facility created under the project.

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

NA

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

1. 3775_Record_Notes_of_meeting_held_on_06-08-2021
2. 3775_ Record_Notes_of_meeting_held_on_18-10-2021
3. 3775_ Record_Notes_of_meeting_held_on_10-03-2022
4. 3775_ Record_Notes_of_meeting_held_on_22-06-2022
5. 3775_Guidelines for PCBs, PCB-containing equipment and waste identification, tracking, and record keeping,
6. 3775_Guidelines for PCBs, PCB-containing equipment and waste collection, packaging, and transportation
7. 3775_Guidelines for PCBs, PCB-containing equipment and waste interim storage
8. 3775-Guidelines for PCBs, PCB-containing equipment and waste disposal
9. 3775_Guidance document on Reduction and Elimination of PCBs, prioritizing the Power Sector in India
10. 3775_Occupational Health and Safety Manual for Maintenance of polychlorinated biphenyls filled transformer, contaminated transformer oil, analytical laboratories and de-chlorination process industry

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),.

As a GEF-4 project the CEO Endorsement did not foresee main gender issues.

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.

NA

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

1. 3775_Boiler_Units
2. 3775_Chiller_Units
3. 3775_HSD_Argon_Oxygen_Tanks-Area
4. 3775_Indirect_Thermal_Desorption_System
5. 3775_NaD_Preparation_System
6. 3775_Plant Area
7. 3775_Plascon_System
8. 3775_Process_Area
9. 3775_Storage_Tanks

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.

Progress Outcomes and achievements:

The project has been successful in the development of guidelines, revalidation of the inventory, awarding of three (3) contracts for i). static facility for the treatment of 3400 tons of PCB contaminated oil, wastes and equipment; ii). Plasma system for the destruction of the pure PCBs 1700 Tonnes and iii). Mobile de-chlorination system for low level PCBs contaminated oil. Much delayed sub-contract with Central Power Research Institute has also been signed by CPRI with the agreed and approved TOR. The project has completed the following major activities:

1. CPRI is updating the inventory. Additionally, 603 PCBs filled/contaminated transformers have been located and identified during inventory updating. 400 tonnes of pure PCBs and 600 tonnes of low contamination (0-500 ppm) PCBs inventory added up and updated.

2. CPRI has de-chlorinated around 231.5 MT of PCB oil of various concentrations using mobile PCB de-chlorination unit at the site of contamination. Mobile unit is being readied to be transported to a PCBs owner's site in Maharashtra to treat 140 MT of low level PCBs.

3. Erection & commissioning of the static PCB plant consisting of plasma system, de-chlorination treatment plant, ITD, MEE, are completed Erection & commissioning of the static PCB plant consisting of plasma system, de-chlorination treatment plant, ITD, MEE, are completed

4. PLASMA System: Plascon System imported from Australia, all equipment reached at site and erected. Technical team from Australia will arrive to commission the system after the COVID 19 lockdown is lifted by GOI.

5. ITD System: All equipment received at site and installation of the system is completed.

6. Process Equipment: Foundation work completed at site as per design. Equipment erection completed

7. MEE and Utilities: MEE & ATFD equipment reached to site and erection completed. Cooling tower received at site and erection completed. Boiler and water softener reached site and erection completed. Chiller unit erected.

8. Pipes and valves: Pipes & fittings reached site and all major piping works completed, except the utility lines from BSP.

9. Oxygen and Argon Tanks: Equipment dispatched to site and erection works completed.

10. Pumps: All pumps erection work completed and piping connection completed.

11. Oil filtration and regeneration unit: Equipment received and placed at exact location and installation completed. Commissioning to be done along with other plant commissioning.

12. Painting and insulation of equipment and pipes: Painting and insulation work will start after hydraulic testing of pipe lines is undertaken.

13. Fork-Lift (Capacity - 5.5 T) is delivered at site.

14. EOT Cranes erected.

15. Main equipment building for both the plants – All the structure work completed. All the civil work with HDPE Lining and RCC Flooring completed

16. Erection & commissioning of the static PCB plant consisting of plasma system, de-chlorination treatment plant, ITD, MEE, are completed.

Electrical

17 1600 KVA Transformer : Transformer installation completed.

18 HT yard: All works completed; transformer charging done power connection successfully given to panel.

19 PCC Panel & APFC Panel: Panels reached site and erection work completed

20 MCC Panel: MCC panel erection completed at site.

21 Electrical cables and cable trays: Cable tray, cable laying and connection work completed

22 Local push buttons: Push buttons reached site, erection completed

23 1600 KVA Transformer : Transformer installation completed.

24 HT yard: All works completed; transformer charging done power connection successfully given to panel.

25 PCC Panel & APFC Panel: Panels reached site and erection work completed

26 MCC Panel: MCC panel erection completed at site.

27 Electrical cables and cable trays: Cable tray, cable laying and connection work completed

28 Local push buttons: Push buttons reached site, erection completed

Instrumentation & other:

29 Field Instruments: 75% of instruments installed in filed pipelines.

30. PLC Panel: Panel reached site and placed in location.

31. License for Oxygen and Argon: Drawing approved and erection done. Town planning permission obtained by BSP. Applied for final approval to Petroleum and Explosive Safety Organisation (PESO) Nagpur.

32. As BSP received building permission from corporation NOC for Diesel storage applied to district collectorate, after that application to be submitted to PESO Nagpur.

33. Safety manual: Submitted to BSP

34. Lab equipment: BARC approval received for GC ECD and equipment commissioning completed.

Progress during the reporting period is as follows:

Mobile dechlorination system

35. Owners of the largest holders of PCB contaminated oil have been identified and the status of the treatment are as follows;

a. M/s. Neyveli Lignite Corporation ---500MT

b. Tarapur Atomic Power plant 20.95MT--Completed

c. Chandrapur Thermal Power Station—129MTcompleted

d. Chandrapur Thermal Power Station -355Kl –awaiting for order

e. Transmission Corporation of Andhra Pradesh Limited, Vijayawada---39MT,

f. Pinki Thermal Power station, UP-55KL-- order received

g. Gandhi Nagar Thermal Power Station, Gujarat - 60Kl--order received

h. Rajasthan Rajya Vidyut Prasaran Nigam Ltd. Rajasthan -100 Kl - awaiting for order

36. Awareness training programmes: Three training programmes organised in Kerala, West Bengal and Uttar Pradesh

37. Participant at M/s. KSEB Nallalam, Kerala were given training on "condition monitoring of transformer by oil analysis and safe handling of PCB contaminated power transformers"

38. As on 30th June 2020 a total of 384.58 MT of PCB contaminated oil had been dechlorinated using mobile de-chlorination plant at owner's sites located in different parts of the country.

39. PCB Analysis: 300 oil samples received at CPRI for the analysis of PCB. Analysis completed.

Static plant as BSP

40. Statutory Compliances:

- Consent to Operate (CTO) for both Part A & Part B of project obtained from Chhattisgarh Environment Conservation Board (CECB) on 19th January 2022.
- License for storage & handling of Oxygen, Argon granted by Petroleum and Explosive Safety Organization (PESO) on 07 June 2022.
- Authorization for Hazardous Waste handling granted by Chhattisgarh Environment Conservation Board (CECB) on 05th July, 2022.
- License for storage & handling of diesel by Petroleum and Explosive Safety Organization (PESO) is in process, likely to be issued by 10 August 2022.
- Destruction of Pure PCBs and Decontamination of Porous material (Part A) Project:

41. Indirect Thermal Desorption (ITD) System - All the equipment installed, leakage testing of tanks, fabricated pipe lines completed.

Pre-commissioning of ITD system completed on 31st March, 2022.

42. Multiple Effect Evaporator (MEE) System – Testing of all pumps and rotary equipment completed. Leakage / pressure testing of tanks, surface condensers, Calandrias and other equipment completed. Pre-commissioning of MEE system had been completed on 19th May, 2022.

43. Plascon System – System erected on concrete bed. System connected pipelines for argon oxygen and PCB fabricated and tested. Final commissioning will be done in presence of foreign experts.

44. Boiler- Both the boilers (Capacity – 600 Kg/Hour) and connected 30 Meter stack erected, connections completed on 2nd July 2021. _ Both the boilers commissioned on 4th April 2022.

45. Decontamination of High / Low Level PCB oil (Part B) Systems:
- All the Process tanks, storage tanks and other connected systems installed, systemization completed.
Testing of pumps & other rotary equipment completed.

46. Air Compressors & Air Driers - Both the compressors & driers commissioned on 5th July 2021.

47. Chillers- Both the chillers commissioned on 27th May 2022.

48. Oil de-gasifier & Oil Re-generation units – Erection completed pressure testing with water done.

49. Sodium Dispersion Solution Preparation System- Erection and pressure testing done.

50. De-Chlorination Process chamber- erection and pressure testing done.

51. Lab Instrument- All the lab instruments installed and tested. The GC ECD instrument was commissioned but now the quantification of PCB oil concentration is not working. OES contacted to rectify the fault.

52. Other activities:

- Instrumentation Work-Installation, testing of all instruments completed.

- Classroom training had been given to BSP operational team on 4th January 2022.
- All the raw materials for commissioning received at site.
- Two numbers of PCB oil filled transformers have been transferred to PCB site from Bhillai Steel Plant on 27th June 2022. PCB oil drained out from transformer and stored in designated tank. Decontamination works are in progress.

Challenges

1. Complete lockdown in the state/country due to COVID-19 pandemic resulting in work stoppage during March – October 2020 and again during April - Mid June 2021. However, the work resumed with full swing to make up lost time when the lockdown was relaxed in between.

2. To convince the owner of the PCBs to come forward for the safe disposal of their stocks through the facilities put up under the project.

3. The other biggest challenge faced by stakeholders is to arrange for huge sum of funds for the treatment of large quantities of contaminated oil and cost for the replacement with new fresh oil. The project partner CPRI is encouraging owners of the PCBs stock owners to come forward and get their material treated at subsidised rates utilising the facility created under the project.

2. Please briefly elaborate on any **minor amendments**[6] 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.

☐	Results Framework	
☐	Components and Cost	
☐	Institutional and Implementation Arrangements	
☐	Financial Management	
☐	Implementation Schedule	
☐	Executing Entity	
☐	Executing Entity Category	
☐	Minor Project Objective Change	
☐	Safeguards	
☐	Risk Analysis	
☐	Increase of GEF Project Financing Up to 5%	
☐	Co-Financing	
☐	Location of Project Activities	
☐	Others	

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

As of June 30, 2022, the project has total disbursement of US$ 13,072,762.77. A cumulative total of US$ 5,858,192.16 was allocated for the major intervention in component 4 on the implementation of ESM and

[6] 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%.

final treatment of PCBs and the disbursement of US$ 5,392,419.8 was made. The project has remaining US$ 1,027,237.23 remaining funds which will suffice to complete all remaining activities.

Delivery report is placed below.

PROJECT DELIVERY REPORT

		Project:	104044 - ENVIRONMENTALLY SOUND MANAGEMENT AND FINAL DISPOSAL OF PCBS IN INDIA	**Project Manager:**	Carmela Centeno	**Project Validity:** **Status:**	18.01.2010 - 31.12.2022 Implement
Reporting Period:	**18.01.2010 - 30.06.2022**	**Project Theme:**	Energy and Environment	**Country:**	India	**Region**	Asia and Pacific

Sponsor Nr.	**Sponsor**	**Grant**	**Grant Description**	**Fund**	**Currency**	**Grant Status**	**Grant Validity**
400150	GEF - Global Environment Facility	200000250	GFIND10001	GF	USD	Authority to implement	18.01.2010 - 31.12.2022

		Current Year				Cumulative to Date					
	Description	**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)**
200000250	**Status: Authority to implement**										
104044-1-01-01	**GFIND10001**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**
1100	Staff & Intern Consultants	41,123.48	239.02	1,572.68	1,811.70	143,510.55	143,510.55	104,198.77	39,311.78	0.00	104,198.77
1500	Local travel	261.94	0.00	0.00	0.00	66,319.31	66,319.31	66,057.37	261.94	0.00	66,057.37
1700	Nat.Consult./Staff	0.00	0.00	0.00	0.00	132,567.02	132,567.02	132,567.02	0.00	0.00	132,567.02
2100	Contractual Services	40,987.88	(656,333.79)	665,842.10	9,508.31	4,187,490.94	4,187,490.94	4,156,011.37	31,479.57	0.00	4,156,011.37
3000	Train/Fellowship/Study	(987.50)	543.75	32.11	575.86	1,911.21	1,911.21	3,474.57	(1,563.36)	0.00	3,474.57
3500	International Meetings	414.95	0.00	0.00	0.00	46,063.32	46,063.32	45,648.37	414.95	0.00	45,648.37
4300	Premises	(30.86)	260.51	12,269.68	12,530.19	46,446.53	46,446.53	59,007.58	(12,561.05)	0.00	59,007.58
5100	Other Direct Costs	124,223.71	505.59	1,152.06	1,657.65	(6,869.39)	(6,869.39)	(129,435.45)	122,566.06	0.00	(129,435.45)
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	477,252.00	477,252.00
104044-1-01-01	**Total**	**205,993.60**	**(654,784.92)**	**680,868.63**	**26,083.71**	**4,617,439.49**	**4,617,439.49**	**4,437,529.60**	**179,909.89**	**477,252.00**	**4,914,781.60**
104044-1-02-01	**1.1 PCB Regulation reviewed**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**
1100	Staff & Intern Consultants	0.00	0.00	0.00	0.00	73,908.50	73,908.50	73,908.50	0.00	0.00	73,908.50
1500	Local travel	10.09	0.00	0.00	0.00	20,082.54	20,082.54	20,072.45	10.09	0.00	20,072.45
1700	Nat.Consult./Staff	11.90	0.00	0.00	0.00	67,685.96	67,685.96	67,674.06	11.90	0.00	67,674.06
2100	Contractual Services	0.00	0.00	0.00	0.00	77,715.47	77,715.47	77,715.47	0.00	0.00	77,715.47
4300	Premises	0.00	0.00	0.00	0.00	39,355.38	39,355.38	39,355.38	0.00	0.00	39,355.38
5100	Other Direct Costs	0.00	0.00	0.00	0.00	5,426.02	5,426.02	5,426.02	0.00	0.00	5,426.02
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16,350.23	16,350.23
104044-1-02-01	**Total**	**21.99**	**0.00**	**0.00**	**0.00**	**284,173.87**	**284,173.87**	**284,151.88**	**21.99**	**16,350.23**	**300,502.11**
104044-1-02-02	**1.2 PCB Regulation established**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**
1100	Staff & Intern Consultants	26,390.35	0.00	0.00	0.00	26,419.12	26,419.12	28.77	26,390.35	0.00	28.77
1700	Nat.Consult./Staff	1,872.98	0.00	0.00	0.00	25,996.00	25,996.00	24,123.02	1,872.98	0.00	24,123.02
3000	Train/Fellowship/Study	0.00	0.00	0.00	0.00	242.25	242.25	242.25	0.00	0.00	242.25
5100	Other Direct Costs	9,020.59	0.00	0.00	0.00	9,506.08	9,506.08	485.49	9,020.59	0.00	485.49
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(193.60)	(193.60)
104044-1-02-02	**Total**	**37,283.92**	**0.00**	**0.00**	**0.00**	**62,163.45**	**62,163.45**	**24,879.53**	**37,283.92**	**(193.60)**	**24,685.93**

* Does not include Unapproved Obligations

PROJECT DELIVERY REPORT

Project:	104044 - ENVIRONMENTALLY SOUND MANAGEMENT AND FINAL DISPOSAL OF PCBS IN INDIA	**Project Manager:**	Carmela Centeno	**Project Validity:** **Status:**	18.01.2010 - 31.12.2022 Implement		
Reporting Period:	18.01.2010 - 30.06.2022	**Project Theme:**	Energy and Environment	**Country:**	India	**Region**	Asia and Pacific

Sponsor Nr.	Sponsor	Grant	Grant Description	Fund	Currency	Grant Status	Grant Validity
400150	GEF - Global Environment Facility	200000250	GFIND10001	GF	USD	Authority to implement	18.01.2010 - 31.12.2022

	Description	Current Year: Released Budget Current Year (a)	Current Year: Obligations Current Year (b)	Current Year: Disbursements Current Year (c)	Current Year: Expenditures Current Year (d=b+c)	Cumulative to Date: Total Agreement Budget (e)	Cumulative to Date: Released Budget (f)	Cumulative to Date: Obligations + Disbursements (g)	Cumulative to Date: Funds Available* (h=f-g)	Cumulative to Date: Support Cost (i)	Cumulative to Date: Total Expenditures (j=g+i)
104044-1-02-03	**1.3 PCB Regulations implemented**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1100	Staff & Intern Consultants	0.00	0.00	0.00	0.00	9,541.36	9,541.36	9,541.36	0.00	0.00	9,541.36
1500	Local travel	20,000.00	0.00	0.00	0.00	20,000.00	20,000.00	0.00	20,000.00	0.00	0.00
1700	Nat.Consult./Staff	11,891.26	10,595.48	0.00	10,595.48	29,614.81	29,614.81	28,319.03	1,295.78	0.00	28,319.03
3000	Train/Fellowship/Study	25,000.00	0.00	0.00	0.00	25,000.00	25,000.00	0.00	25,000.00	0.00	0.00
5100	Other Direct Costs	3,784.12	0.00	0.00	0.00	5,396.01	5,396.01	1,611.89	3,784.12	0.00	1,611.89
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,965.54	1,965.54
104044-1-02-03	**Total**	**60,675.38**	**10,595.48**	**0.00**	**10,595.48**	**89,552.18**	**89,552.18**	**39,472.28**	**50,079.90**	**1,965.54**	**41,437.82**
104044-1-02-04	**1.4 ESM Guidelines**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1100	Staff & Intern Consultants	17,520.39	0.00	0.00	0.00	17,520.39	17,520.39	0.00	17,520.39	0.00	0.00
1500	Local travel	20,000.00	0.00	0.00	0.00	20,000.00	20,000.00	0.00	20,000.00	0.00	0.00
1700	Nat.Consult./Staff	10,000.00	0.00	0.00	0.00	11,919.57	11,919.57	1,919.57	10,000.00	0.00	1,919.57
3000	Train/Fellowship/Study	20,000.00	0.00	0.00	0.00	20,000.00	20,000.00	0.00	20,000.00	0.00	0.00
5100	Other Direct Costs	620.72	0.00	0.00	0.00	1,854.92	1,854.92	1,234.20	620.72	0.00	1,234.20
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	323.26	323.26
104044-1-02-04	**Total**	**68,141.11**	**0.00**	**0.00**	**0.00**	**71,294.88**	**71,294.88**	**3,153.77**	**68,141.11**	**323.26**	**3,477.03**
104044-1-03-01	**2.1 Evaluation of Capacity**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1500	Local travel	13,409.32	0.00	1,379.65	1,379.65	15,000.00	15,000.00	2,970.33	12,029.67	0.00	2,970.33
1700	Nat.Consult./Staff	11.65	0.00	0.00	0.00	20,213.38	20,213.38	20,201.73	11.65	0.00	20,201.73
2100	Contractual Services	0.00	0.00	0.00	0.00	49,049.65	49,049.65	49,049.65	0.00	0.00	49,049.65
4300	Premises	0.00	0.00	0.00	0.00	40.50	40.50	40.50	0.00	0.00	40.50
5100	Other Direct Costs	17,416.67	(300.00)	308.45	8.45	19,904.44	19,904.44	2,496.22	17,408.22	0.00	2,496.22
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7,662.73	7,662.73
104044-1-03-01	**Total**	**30,837.64**	**(300.00)**	**1,688.10**	**1,388.10**	**104,207.97**	**104,207.97**	**74,758.43**	**29,449.54**	**7,662.73**	**82,421.16**

*** Does not include Unapproved Obligations**

PROJECT DELIVERY REPORT

Project:	104044 - ENVIRONMENTALLY SOUND MANAGEMENT AND FINAL DISPOSAL OF PCBS IN INDIA	**Project Manager:**	Carmela Centeno	**Project Validity:** **Status:**	18.01.2010 - 31.12.2022 Implement		
Reporting Period:	18.01.2010 - 30.06.2022	**Project Theme:**	Energy and Environment	**Country:**	India	**Region**	Asia and Pacific

Sponsor Nr.	Sponsor	Grant	Grant Description	Fund	Currency	Grant Status	Grant Validity
400150	GEF - Global Environment Facility	200000250	GFIND10001	GF	USD	Authority to implement	18.01.2010 - 31.12.2022

	Description	Current Year: Released Budget Current Year (a)	Current Year: Obligations Current Year (b)	Current Year: Disbursements Current Year (c)	Current Year: Expenditures Current Year (d=b+c)	Cumulative to Date: Total Agreement Budget (e)	Cumulative to Date: Released Budget (f)	Cumulative to Date: Obligations + Disbursements (g)	Cumulative to Date: Funds Available* (h=f-g)	Cumulative to Date: Support Cost (i)	Cumulative to Date: Total Expenditures (j=g+i)
104044-1-03-02	**2.2 Training for stakeholders**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1100	Staff & Intern Consultants	0.00	0.00	0.00	0.00	28.77	28.77	28.77	0.00	0.00	28.77
1500	Local travel	18,019.21	(1,067.20)	176.15	(891.05)	26,414.19	26,414.19	7,503.93	18,910.26	0.00	7,503.93
1700	Nat.Consult./Staff	12,670.20	0.00	0.00	0.00	117,557.04	117,557.04	104,886.84	12,670.20	0.00	104,886.84
3000	Train/Fellowship/Study	66,128.33	0.00	0.00	0.00	71,750.13	71,750.13	5,621.80	66,128.33	0.00	5,621.80
5100	Other Direct Costs	1,925.36	0.00	0.00	0.00	4,549.66	4,549.66	2,624.30	1,925.36	0.00	2,624.30
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11,773.08	11,773.08
104044-1-03-02	**Total**	**98,743.10**	**(1,067.20)**	**176.15**	**(891.05)**	**220,299.79**	**220,299.79**	**120,665.64**	**99,634.15**	**11,773.08**	**132,438.72**
104044-1-03-03	**2.3 Inventory & Database**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1500	Local travel	0.00	0.00	0.00	0.00	9,773.02	9,773.02	9,773.02	0.00	0.00	9,773.02
1700	Nat.Consult./Staff	(314.12)	0.00	0.00	0.00	78,371.28	78,371.28	78,685.40	(314.12)	0.00	78,685.40
2100	Contractual Services	42,977.40	0.00	0.00	0.00	225,738.52	225,738.52	182,761.12	42,977.40	0.00	182,761.12
5100	Other Direct Costs	(198.21)	0.00	0.00	0.00	1,779.96	1,779.96	1,978.17	(198.21)	0.00	1,978.17
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27,715.63	27,715.63
104044-1-03-03	**Total**	**42,465.07**	**0.00**	**0.00**	**0.00**	**315,662.78**	**315,662.78**	**273,197.71**	**42,465.07**	**27,715.63**	**300,913.34**
104044-1-03-04	**2.4 Analysis & Monitoring**	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1500	Local travel	0.00	0.00	1,361.69	1,361.69	1,960.75	1,960.75	3,322.44	(1,361.69)	0.00	3,322.44
1700	Nat.Consult./Staff	45,128.60	21,826.88	22,173.29	44,000.17	75,400.21	75,400.21	74,271.78	1,128.43	0.00	74,271.78
2100	Contractual Services	0.00	0.00	0.00	0.00	277,265.00	277,265.00	277,265.00	0.00	0.00	277,265.00
5100	Other Direct Costs	1,117.25	0.00	227.96	227.96	1,171.42	1,171.42	282.13	889.29	0.00	282.13
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36,195.21	36,195.21
104044-1-03-04	**Total**	**46,245.85**	**21,826.88**	**23,762.94**	**45,589.82**	**355,797.38**	**355,797.38**	**355,141.35**	**656.03**	**36,195.21**	**391,336.56**

*** Does not include Unapproved Obligations**

PROJECT DELIVERY REPORT

Project:	104044 - ENVIRONMENTALLY SOUND MANAGEMENT AND FINAL DISPOSAL OF PCBS IN INDIA	**Project Manager:**	Carmela Centeno	**Project Validity:** **Status:**	18.01.2010 - 31.12.2022 Implement		
Reporting Period:	18.01.2010 - 30.06.2022	**Project Theme:**	Energy and Environment	**Country:**	India	**Region**	Asia and Pacific

Sponsor Nr.	Sponsor	Grant	Grant Description	Fund	Currency	Grant Status	Grant Validity
400150	GEF - Global Environment Facility	200000250	GFIND10001	GF	USD	Authority to implement	18.01.2010 - 31.12.2022

	Description	Current Year: Released Budget Current Year (a)	Current Year: Obligations Current Year (b)	Current Year: Disbursements Current Year (c)	Current Year: Expenditures Current Year (d=b+c)	Cumulative to Date: Total Agreement Budget (e)	Cumulative to Date: Released Budget (f)	Cumulative to Date: Obligations + Disbursements (g)	Cumulative to Date: Funds Available* (h=f-g)	Cumulative to Date: Support Cost (i)	Cumulative to Date: Total Expenditures (j=g+i)
104044-1-03-05	**2.5 Awareness raising**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**
1500	Local travel	12.56	0.00	0.00	0.00	15,604.66	15,604.66	15,592.10	12.56	0.00	15,592.10
1700	Nat.Consult./Staff	0.00	0.00	0.00	0.00	33,984.54	33,984.54	33,984.54	0.00	0.00	33,984.54
2100	Contractual Services	872.03	0.00	0.00	0.00	157,493.84	157,493.84	156,621.81	872.03	0.00	156,621.81
5100	Other Direct Costs	0.00	0.00	0.00	0.00	2,014.17	2,014.17	2,014.17	0.00	0.00	2,014.17
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21,192.36	21,192.36
104044-1-03-05	**Total**	**884.59**	**0.00**	**0.00**	**0.00**	**209,097.21**	**209,097.21**	**208,212.62**	**884.59**	**21,192.36**	**229,404.98**
104044-1-04-01	**3.1 ESM of PCBs**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**
1100	Staff & Intern Consultants	0.00	0.00	0.00	0.00	36,755.86	36,755.86	36,755.86	0.00	0.00	36,755.86
1500	Local travel	0.00	0.00	0.00	0.00	35,173.00	35,173.00	35,173.00	0.00	0.00	35,173.00
1700	Nat.Consult./Staff	0.00	0.00	0.00	0.00	219,645.00	219,645.00	219,645.00	0.00	0.00	219,645.00
2100	Contractual Services	0.00	0.00	0.00	0.00	1,069,141.26	1,069,141.26	1,069,141.26	0.00	0.00	1,069,141.26
3000	Train/Fellowship/Study	0.00	0.00	0.00	0.00	(4,281.63)	(4,281.63)	(4,281.63)	0.00	0.00	(4,281.63)
4500	Equipment	(7.89)	0.00	0.00	0.00	42,856.35	42,856.35	42,864.24	(7.89)	0.00	42,864.24
5100	Other Direct Costs	0.00	0.00	0.00	0.00	2,676.82	2,676.82	2,676.82	0.00	0.00	2,676.82
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	142,351.05	142,351.05
104044-1-04-01	**Total**	**(7.89)**	**0.00**	**0.00**	**0.00**	**1,401,966.66**	**1,401,966.66**	**1,401,974.55**	**(7.89)**	**142,351.05**	**1,544,325.60**
104044-1-05-01	**4.1 ESM in 13 States**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**
1100	Staff & Intern Consultants	868.15	0.00	0.00	0.00	26,320.23	26,320.23	25,452.08	868.15	0.00	25,452.08
1500	Local travel	1,772.05	0.00	0.00	0.00	7,125.00	7,125.00	5,352.95	1,772.05	0.00	5,352.95
1700	Nat.Consult./Staff	(92.46)	0.00	0.00	0.00	39,782.41	39,782.41	39,874.87	(92.46)	0.00	39,874.87
2100	Contractual Services	2,048.38	0.00	0.00	0.00	85,041.38	85,041.38	82,993.00	2,048.38	0.00	82,993.00
3500	International Meetings	0.00	0.00	0.00	0.00	363.34	363.34	363.34	0.00	0.00	363.34
4300	Premises	4,641.24	0.00	0.00	0.00	18,599.96	18,599.96	13,958.72	4,641.24	0.00	13,958.72
5100	Other Direct Costs	535.36	0.00	0.00	0.00	6,209.12	6,209.12	5,673.76	535.36	0.00	5,673.76
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17,801.06	17,801.06
104044-1-05-01	**Total**	**9,772.72**	**0.00**	**0.00**	**0.00**	**183,441.44**	**183,441.44**	**173,668.72**	**9,772.72**	**17,801.06**	**191,469.78**

*** Does not include Unapproved Obligations**

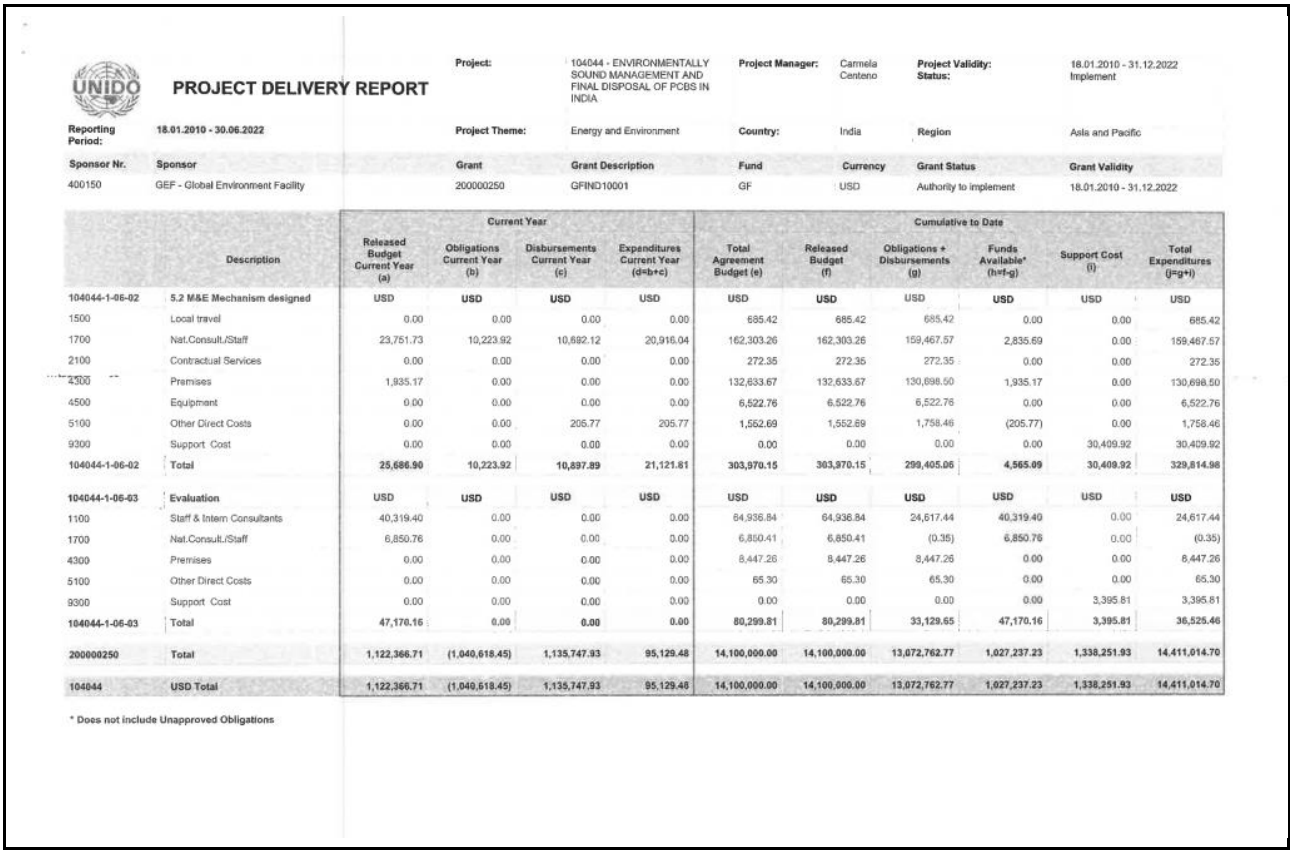
PROJECT DELIVERY REPORT

Project:	104044 - ENVIRONMENTALLY SOUND MANAGEMENT AND FINAL DISPOSAL OF PCBS IN INDIA	**Project Manager:**	Carmela Centeno	**Project Validity:** **Status:**	18.01.2010 - 31.12.2022 Implement		
Reporting Period:	18.01.2010 - 30.06.2022	**Project Theme:**	Energy and Environment	**Country:**	India	**Region**	Asia and Pacific

Sponsor Nr.	Sponsor	Grant	Grant Description	Fund	Currency	Grant Status	Grant Validity
400150	GEF - Global Environment Facility	200000250	GFIND10001	GF	USD	Authority to implement	18.01.2010 - 31.12.2022

	Description	Current Year: Released Budget Current Year (a)	Current Year: Obligations Current Year (b)	Current Year: Disbursements Current Year (c)	Current Year: Expenditures Current Year (d=b+c)	Cumulative to Date: Total Agreement Budget (e)	Cumulative to Date: Released Budget (f)	Cumulative to Date: Obligations + Disbursements (g)	Cumulative to Date: Funds Available* (h=f-g)	Cumulative to Date: Support Cost (i)	Cumulative to Date: Total Expenditures (j=g+i)
104044-1-05-02	**4.2 Interim Storage and Transport**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**
1500	Local travel	1,704.79	0.00	0.00	0.00	5,308.97	5,308.97	3,604.18	1,704.79	0.00	3,604.18
1700	Nat.Consult./Staff	4,479.13	(0.01)	0.00	(0.01)	6,720.59	6,720.59	2,241.45	4,479.14	0.00	2,241.45
2100	Contractual Services	0.00	0.00	0.00	0.00	279,577.91	279,577.91	279,577.91	0.00	0.00	279,577.91
5100	Other Direct Costs	(100.80)	0.00	0.00	0.00	141.04	141.04	241.84	(100.80)	0.00	241.84
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29,280.68	29,280.68
104044-1-05-02	**Total**	**6,083.12**	**(0.01)**	**0.00**	**(0.01)**	**291,748.51**	**291,748.51**	**285,665.38**	**6,083.13**	**29,280.68**	**314,946.06**
104044-1-05-03	**4.3 Final ESM Treatment**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**
1100	Staff & Intern Consultants	1,280.41	0.00	0.00	0.00	1,280.41	1,280.41	0.00	1,280.41	0.00	0.00
2100	Contractual Services	378,588.97	(432,234.14)	411,088.72	(21,145.42)	5,331,912.93	5,331,912.93	4,932,178.54	399,734.39	0.00	4,932,178.54
3000	Train/Fellowship/Study	48,826.07	0.00	0.00	0.00	48,826.07	48,826.07	0.00	48,826.07	0.00	0.00
3500	International Meetings	0.00	0.00	0.00	0.00	97.80	97.80	97.80	0.00	0.00	97.80
5100	Other Direct Costs	75.64	0.00	0.00	0.00	885.00	885.00	809.36	75.64	0.00	809.36
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	505,641.29	505,641.29
104044-1-05-03	**Total**	**428,771.09**	**(432,234.14)**	**411,088.72**	**(21,145.42)**	**5,383,002.21**	**5,383,002.21**	**4,933,085.70**	**449,916.51**	**505,641.29**	**5,438,726.99**
104044-1-06-01	**5.1 Establish Project Management Struct.**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**	**USD**
1100	Staff & Intern Consultants	38.52	0.00	0.00	0.00	38.52	38.52	0.00	38.52	0.00	0.00
1700	Nat.Consult./Staff	13,510.10	5,121.54	7,016.92	12,138.46	106,011.31	106,011.31	104,639.67	1,371.64	0.00	104,639.67
3000	Train/Fellowship/Study	0.00	0.00	0.00	0.00	58.47	58.47	58.47	0.00	0.00	58.47
4300	Premises	0.00	0.00	0.00	0.00	24,769.92	24,769.92	24,769.92	0.00	0.00	24,769.92
4500	Equipment	0.00	0.00	0.00	0.00	938.13	938.13	938.13	0.00	0.00	938.13
5100	Other Direct Costs	49.74	0.00	248.58	248.58	(5,934.13)	(5,934.13)	(5,735.29)	(198.84)	0.00	(5,735.29)
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9,135.68	9,135.68
104044-1-06-01	**Total**	**13,598.36**	**5,121.54**	**7,265.50**	**12,387.04**	**125,882.22**	**125,882.22**	**124,670.90**	**1,211.32**	**9,135.68**	**133,806.58**

*** Does not include Unapproved Obligations**



PROJECT DELIVERY REPORT

Project:	104044 - ENVIRONMENTALLY SOUND MANAGEMENT AND FINAL DISPOSAL OF PCBS IN INDIA	Project Manager:	Carmela Centeno	Project Validity: Status:	18.01.2010 - 31.12.2022 Implement		
Reporting Period:	18.01.2010 - 30.06.2022	Project Theme:	Energy and Environment	Country:	India	Region	Asia and Pacific

Sponsor Nr.	Sponsor	Grant	Grant Description	Fund	Currency	Grant Status	Grant Validity
400150	GEF - Global Environment Facility	200000250	GFIND10001	GF	USD	Authority to implement	18.01.2010 - 31.12.2022

		Current Year				Cumulative to Date					
	Description	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)
104044-1-06-02	5.2 M&E Mechanism designed	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1500	Local travel	0.00	0.00	0.00	0.00	685.42	685.42	685.42	0.00	0.00	685.42
1700	Nat.Consult./Staff	23,751.73	10,223.92	10,682.12	20,916.04	162,303.26	162,303.26	159,467.57	2,835.69	0.00	159,467.57
2100	Contractual Services	0.00	0.00	0.00	0.00	272.35	272.35	272.35	0.00	0.00	272.35
4300	Premises	1,935.17	0.00	0.00	0.00	132,633.67	132,633.67	130,698.50	1,935.17	0.00	130,698.50
4500	Equipment	0.00	0.00	0.00	0.00	6,522.76	6,522.76	6,522.76	0.00	0.00	6,522.76
5100	Other Direct Costs	0.00	0.00	205.77	205.77	1,552.69	1,552.69	1,758.46	(205.77)	0.00	1,758.46
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30,409.92	30,409.92
104044-1-06-02	Total	25,686.90	10,223.92	10,887.89	21,121.81	303,970.15	303,970.15	299,405.06	4,565.09	30,409.92	329,814.98
104044-1-06-03	Evaluation	USD	USD	USD	USD	USD	USD	USD	USD	USD	USD
1100	Staff & Intern Consultants	40,319.40	0.00	0.00	0.00	64,936.84	64,936.84	24,617.44	40,319.40	0.00	24,617.44
1700	Nat.Consult./Staff	6,850.76	0.00	0.00	0.00	6,850.41	6,850.41	(0.35)	6,850.76	0.00	(0.35)
4300	Premises	0.00	0.00	0.00	0.00	8,447.26	8,447.26	8,447.26	0.00	0.00	8,447.26
5100	Other Direct Costs	0.00	0.00	0.00	0.00	65.30	65.30	65.30	0.00	0.00	65.30
9300	Support Cost	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,395.81	3,395.81
104044-1-06-03	Total	47,170.16	0.00	0.00	0.00	80,299.81	80,299.81	33,129.65	47,170.16	3,395.81	36,525.46
200000250	Total	1,122,366.71	(1,040,618.45)	1,135,747.93	95,129.48	14,100,000.00	14,100,000.00	13,072,762.77	1,027,237.23	1,338,251.93	14,411,014.70
104044	USD Total	1,122,366.71	(1,040,618.45)	1,135,747.93	95,129.48	14,100,000.00	14,100,000.00	13,072,762.77	1,027,237.23	1,338,251.93	14,411,014.70

* Does not include Unapproved Obligations

IX. Work Plan and Budget

1. Please provide **an updated project work plan and budget** for <u>the remaining duration of the project</u>, 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	2022				2023				2024				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:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Component 3 –													
Outcome :													
Output 3.1:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Output 3.2:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

Component 4 -													
Outcome 4: **Regional capability for final treatment and disposal of PCBs, PCB-containing equipment and wastes**													
Output 4.1 Management system for identification, tracking, collection, packaging, transport, interim storage, record keeping, and disposal of PCBs, PCB-containing equipment and wastes developed and operational	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	
Output 4.2 ESM and transport to interim storage sites of PCB-containing materials incl. specialized transport vehicles for highly concentrated PCBs with GPS and adequate preparedness measures in case of emergency on transport routes to stationary disposal unit carried out	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	
Output 4.3 Final ESM treatment of at least 7,700 tons of PCBs, PCB-containing equipment and PCB-contaminated oil and wastes undertaken	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	
Component 5 -													
Outcome 5**: Project Management and monitoring and evaluation**													
Output 5.1 Project management structure established	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	
Output 5.2 An M&E mechanism designed and implemented according to GEF M&E procedures	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☐	

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 all 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 achieve most of its major global environmental objectives, and yields satisfactory global environmental benefits, with only minor shortcomings.
Moderately Satisfactory (MS)	Project is expected to achieve most of its major relevant 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 some of its major global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.
Unsatisfactory (U)	Project is expected not to achieve most 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, any of its major global environmental objectives with no worthwhile benefits.

Implementation Progress (IP)	
Highly Satisfactory (HS)	Implementation of all 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 most 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 some components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.
Moderately Unsatisfactory (MU)	Implementation of some components is not in substantial compliance with the original/formally revised plan with most components requiring remedial action.
Unsatisfactory (U)	Implementation of most components in not in substantial compliance with the original/formally revised plan.
Highly Unsatisfactory (HU)	Implementation of none of the components is in substantial compliance with the original/formally revised plan.

Risk ratings	
Risk ratings will access 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.