

Block I General details	
1	<p>Location of the PCB disposal facility:</p> <p>Name of Facility: Kioshi S.A. City: Buenos Aires Country: Argentina <i>(Provide address information in Block IV)</i></p>
2	<p>Licence / authorization:</p> <p>Is this facility licensed or authorized to handle PCBs? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If "Yes":</p> <p>(i) Nature of license / authorization: Annual Certification</p> <p>(ii) (ii) Please submit the licensing history <i>(please attach to this questionnaire): This certification is granted after demonstration of the technology and government verification.</i></p> <p>Issuing authority <i>(name)</i>: Secretary of Environment and Sustainable Development (SAyDS)</p> <p><input checked="" type="checkbox"/> National <input type="checkbox"/> Local or <input type="checkbox"/> Independent</p>
3	<p>Please provide information on storage at the facility including:</p> <p>Capacity for the various PCB waste and equipment types:</p> <p>The service we provide does not include storage of PCB waste material in our facility. Mobile plant to be installed in customer's site.</p> <p>Method:</p> <p>Sodium reduction and oil recycling.</p> <p>Holding time:</p>
4	<p>Worker protection <i>(Please summarize protective measures applied during treatment of PCB wastes)</i></p> <p>All employees involved in PCB treatment wear security clothes and protection elements as: overall, gloves, glasses, shoes, masks, earplugs, and helmets. We also do PCB analysis concentration in working areas air.</p> <p>Does the facility have an accident book? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Most frequent cause(s) of incidents involving PCBs:</p> <p>No accidents reported.</p>

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Opinion box - PCB Management issues *(Please describe briefly)*

What are your major concerns?

Can you identify research and development needs in PCB management that would be beneficial for your region and waste managers worldwide?

Block II Types of PCB wastes

Part A: Treatment of PCB containing equipment/material

Part A1: Metallic Parts NOT APPLICABLE

A1.1	Types of metallic PCB equipment/material treated:	Limitation on waste accepted <i>(please specify, if appropriate)</i>		
		Concentration <i>(specify the unit)</i>	Quantity <i>(specify the unit)</i>	
		unit:	unit:	
		min	max	unit:
	<input type="checkbox"/> Equipment containing 100 % PCB			
<input type="checkbox"/> Equipment containing mineral oil contaminated by PCB				
<input type="checkbox"/> Others:				
<i>Please specify any other limitation on waste accepted:</i>				
A1.2	<p>Presentation of metallic equipment/material</p> <p>In what form must the metallic PCB equipment/material be presented:</p> <p><input type="checkbox"/> Drums</p> <p><input type="checkbox"/> Other packaging:</p> <p><input type="checkbox"/> Other constraints:</p>			

A1.3

Treatment of metallic PCB equipment/material

Immediate destruction of metallic equipment/material containing PCB? Yes No

If 'Yes', please specify the applied technology in Part III

Extraction of PCB? Yes No

If 'Yes':

- please specify the applied technology in Part III
- Is the decontaminated metallic equipment/material subjected to reuse/recycling? Yes No

If 'Yes', please specify in **Block II Part C** (Reuse and recycling)

Part A: Treatment of PCB containing equipment/material

Part A2: Non-metallic Parts Not APPLICABLE

A2.1	Types of non-metallic PCB equipment/material treated:	Limitation on waste accepted <i>(please specify, if appropriate)</i>	
		Concentration <i>(specify the unit)</i> unit: min max	Quantity <i>(specify the unit)</i> unit:
	<input type="checkbox"/> PCB-containing materials (clothes, cables, etc.)		
	<input type="checkbox"/> PCB-contaminated residues, sludges		
	<input type="checkbox"/> PCB-contaminated soils and sediments		
	<input type="checkbox"/> Packaged / drummed waste		
	<input type="checkbox"/> Other:		
<i>Please specify any other limitation on waste accepted:</i>			
A2.2	<p>Presentation of non-metallic equipment/material</p> <p>In what form must the non-metallic PCB equipment/material be presented:</p> <input type="checkbox"/> Drums <input type="checkbox"/> Other packaging: <input type="checkbox"/> Other constraints:		

A2.3

Treatment of non-metallic PCB equipment/material

Immediate destruction of non-metallic equipment/material containing PCB? Yes No

If 'Yes', please specify the applied technology in Part III

Extraction of PCB? Yes No

If 'Yes':

- please specify the applied technology in Part III
- Is the decontaminated non-metallic equipment/material subjected to reuse/recycling? Yes No

If 'Yes', please specify in **Block II Part C** (Reuse and Recycling)

Part B: Treatment of PCB oils and PCB waste oils

B1

Types of PCB oils and PCB waste oils treated:	Limitation on waste accepted <i>(please specify, if appropriate)</i>		Quantity <i>(specify the unit)</i> unit:
	Concentration <i>(specify the unit)</i> unit: ppm		
	min	max	unit:
<input type="checkbox"/> 100 % PCB oils			
<input checked="" type="checkbox"/> Mineral oils contaminated by PCB	0	5000	
<input checked="" type="checkbox"/> Waste oils contaminated by PCB	0	5000	
<input type="checkbox"/> Other:			
<i>Please specify any other limitation on waste accepted:</i>			

B2

Presentation of PCB oils and PCB waste oils

In what form must the PCB oils and PCB waste oils be presented:

- Drums
- Other packaging: electric equipment
- Other constraints:

B3

Treatment of PCB oils and PCB waste oils

Please specify the applied technology for the destruction of PCB oils and PCB waste oils in Part III

Part C: Reuse & Recycling of decontaminated PCB equipment/material

C1

Types decontaminated PCB equipment/material treated:	Limitation on waste accepted <i>(please specify, if appropriate)</i> Quantity <i>(specify the unit)</i> unit:
<input checked="" type="checkbox"/> Transformers <input checked="" type="checkbox"/> Capacitors	
<input type="checkbox"/> Materials (clothes, cables, etc.)	
<input type="checkbox"/> Residues, sludges	
<input type="checkbox"/> Soils and sediments	
<input checked="" type="checkbox"/> Other: decontaminated oil	

Please specify any other limitation on waste accepted:

C2

Presentation of decontaminated PCB equipment/material

In what form must the decontaminated PCB equipment/material be presented:

- Drums
- Other packaging: transformers, capacitors
- Other constraints:

C3

Treatment of decontaminated PCB equipment/material

Reuse and Recycling of decontaminated PCB equipment/material? Yes No

If 'Yes', please specify the applied technology in Part III

Is the decontaminated PCB equipment/material disposed of? Yes No

If 'Yes', please specify:

Transport to the disposal site? Yes No

If 'Yes':

International transport

National transport

Location of disposal site:

Please provide a short description of disposal site:

Block III Detailed information on applied technologies		
1	The following description refers to Block II, Part:	Type of PCB waste or decontaminated equipment/material:
	<input type="checkbox"/> A1 (Treatment of metallic PCB equipment/material)	
	<input type="checkbox"/> A2 (Treatment of non-metallic PCB equipment/material)	
	<input checked="" type="checkbox"/> B (Treatment of PCB oil and PCB waste oil)	Electric Equipment
	<input type="checkbox"/> C (Reuse and recycling of decontaminated PCB equipment/material)	
2	Applied technologies (Please specify the technology used for disposal):	
<input type="checkbox"/> Pyrolysis / gasifiers <input type="checkbox"/> Gas Phase Chemical Reduction (GPCR) <input type="checkbox"/> Base Catalysed Decomposition (BCD) <input checked="" type="checkbox"/> Sodium Reduction <input type="checkbox"/> Super-Critical Water Oxidation (SCWO) <input type="checkbox"/> Plasma Arc <input type="checkbox"/> Molten Salt Oxidation <input type="checkbox"/> Solvated Electron Technology <input type="checkbox"/> Retrofilling <input type="checkbox"/> Other:		
Type of technology (1-sentence description):		
Substitution of chlorine atoms by aliphatic structures		
Description of the technology please provide additional information as appropriate (<i>summarize here and, if necessary, attach documentation</i>)		
The treatment of PCB elimination is a chemical process of oil decontamination based on the Wurtz reaction.		
The process includes an attack with a reagent that has alkaline metals, obtaining free organic chlorine compounds, which form part of the reaction remainder, and inert inorganic Chloride, being separated in later stages of the process, obtaining a free PCB oil. Finally, this oil is treated to recover its dielectric properties.		
Commissioned? <input type="checkbox"/> Yes <input type="checkbox"/> No Year:		
Can the technology be used in a mobile facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

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State of development

Does the technology exist as an industrial unit? Yes No

If "No", please indicate when it will become operational:

If "Yes", please indicate how many units exist: 5

In what countries: Argentina

4	<p>Pretreatment:</p> <p>Does the technology require any pretreatment procedures? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If "Yes", please specify required pretreatment procedures:</p> <p><input type="checkbox"/> Thermal Desorption</p> <p><input type="checkbox"/> Dilution</p> <p><input type="checkbox"/> Low Temperature Rinsing</p> <p><input type="checkbox"/> Electro-osmosis</p> <p><input type="checkbox"/> Draining/Solvent washing</p> <p><input type="checkbox"/> Dismantling/Shredding</p> <p><input type="checkbox"/> Other:</p>												
5	<p>Byproducts</p> <p>What byproducts does the technology produce? <i>(please specify below)</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Byproduct</th> <th style="width: 40%;">Kind</th> <th style="width: 35%;">Amount</th> </tr> </thead> <tbody> <tr> <td>Liquids:</td> <td></td> <td>L per tonnes of waste treated</td> </tr> <tr> <td>Solids:</td> <td>Soil with oil</td> <td>5 kg per tonnes of waste treated</td> </tr> <tr> <td>Air:</td> <td></td> <td>m³ per tonnes of waste treated</td> </tr> </tbody> </table> <p>Does the technology allow all byproducts to be monitored for POPs*/PTS** before release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If POPs*/PTS** are discovered, can the byproducts be returned to the process for further treatment? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Are any of the byproducts classified as other sorts of hazardous wastes? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If "Yes" please specify:</p> <ul style="list-style-type: none"> - Resulting remainders of the operations of elimination of industrial waste <p>What volumes of such byproducts are generated by handling a unit volume of PCB wastes:</p> <p>Can third party monitoring data be provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><i>If "Yes", please attach to this questionnaire.</i></p> <p style="text-align: right; font-size: small;">* POPs: Persistent Organic Pollutants ** PTS: Persistent Toxic Substances</p> <p>How are byproducts disposed of? <i>(please describe briefly)</i></p> <p>The mentioned remainders are incinerated in charge of the client. The oil treated, once free about PCB, can be reused previous treatment conducted by our company.</p>	Byproduct	Kind	Amount	Liquids:		L per tonnes of waste treated	Solids:	Soil with oil	5 kg per tonnes of waste treated	Air:		m ³ per tonnes of waste treated
Byproduct	Kind	Amount											
Liquids:		L per tonnes of waste treated											
Solids:	Soil with oil	5 kg per tonnes of waste treated											
Air:		m ³ per tonnes of waste treated											

<p>6</p>	<p>Efficiency <i>(please specify, if appropriate)</i></p> <p>Destruction efficiencies (DEs):. > 99.9 %</p>
<p>7</p>	<p>Monitoring & Control of releases</p> <p>What technologies are used to monitor releases: Air: NIOSH 5503 Effluents: Solids:</p> <p>Are all releases monitored for POPs/PTS before release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If POPs*/PTS** are discovered, can the releases be returned to the process for further treatment? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Are any of the releases classified as hazardous wastes? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If "Yes" please specify:</p> <p>What technologies are used/ required to monitor and treat any such releases prior to release:</p> <p>What volumes of such releases are generated by handling a unit volume of PCB wastes:</p> <p>Is third party monitoring data available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p><i>If "Yes", please attach to this questionnaire.</i></p> <p style="text-align: right;">* POPs: Persistent Organic Pollutants ** PTS: Persistent Toxic Substances</p> <hr/> <p>How are releases disposed of? <i>(please describe briefly)</i></p>

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Disposal costs

What are the *approximate* costs for applying the technology per unit[‡], **including** costs for all technical pretreatment steps, **excluding** all costs **not** related to the technical application of the technology (transport costs, costs for disposal of decontaminated transformers/capacitors/materials, etc.)?

Please specify type of treated/disposed PCB equipment/material/oil below:

	Costs per unit [‡]	Currency
a)		
b)		
c)		
d)		
e)		
f)		
g)		

[‡] Specify the unit for a) to g):

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Treatment capacities and scaling (*tonnes per year for main waste & equipment types*)

Capacity of existing facilities: units[‡] per year

Can the technology be adapted to higher or lower capacities? Yes No

If "Yes":

- (i) What is the capacity of the smallest commercially viable facility: units[‡] per year
- (ii) What is the capacity of the largest commercially viable facility: units[‡] per year

Does the adaptation will cause additional costs? Yes No

If "Yes" specify the increase in costs for the adaptation (%) of the initial costs:

- (i) For smaller plants: %
- For larger plants: %

[‡] Please specify the unit:

Block IV**Facility: Address and Service Information****1**

Facility Name: KIOSHI S.A.

Address: Montes de Oca 571

City/Town: Avellaneda

P.O. Box: 1870

District/State: Provincia de Buenos Aires

Country: Argentina

Telephone: 54-11-4201-9988

Fax: 54-11 4201-9988

Email: declorinacion@kioshi.com.ar

Web site: www.kioshi.com.ar

Person completing form

Name: Lic. Alejandro Eiroa

Position: Environmental & Quality Manager

Parent Company (*if different*)

Address:

City/Town:

P.O. Box:

District/State:

Country:

Telephone:

Fax:

Email:

2	Other Services offered by the company <input checked="" type="checkbox"/> Laboratory analysis / testing <input type="checkbox"/> PCB waste packaging for shipment <input type="checkbox"/> PCB classification / labeling <input type="checkbox"/> Clean-up of PCB contaminated sites <input type="checkbox"/> PCB wastes transport <input checked="" type="checkbox"/> Other PCB-related services: reconstitution of dielectrics functions and thermal dissipation of decontaminated mineral oils.
3	Further information Identify any company information (brochures, notes etc...) provided separately and if you wish provide additional comments on your services in not more than 50 words: