

**MOROCCO** Name of Respondent:

Dr. AZZAOUI Samira

Email:

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Agency /Institution:

Ministère Délégué chargé de l'Environnement, Rabat, Maroc

Phone number:

+212 67 90 53 876

**Part I: Basic Information on individual mercury chlor alkali plants for 2015:**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity <sup>1</sup>	Status of chlor alkali plant Closure or Conversion to Non-Mercury Technology ? (Please Provide Details and the Date)			Estimated Quantities of Elemental Mercury stored on site or to be decommissioned  t
		Done	In Progress	Planned	
Name and Contact Information in the plant	In 1000 t				
Quimpac* (sumatoria de dos plantas similares)		-	-	-	
<b>Compagnie Electrochimique Marocaine</b>  <b>Mr José M. Ferreira Iglesias (Directeur Technique)</b>  <b>Route Oued Laou, Km 3, B.P. 194, Tétouan, Maroc</b>  <b>Tel: +212 53 99 73 918/973920/970005</b>			<b>In Discussion</b>		

\*TBD: To be determined

\*\* Información proporcionada por Isaias Flit, Asesor del Presidente - QUIMPAC S.A.

<sup>1</sup> In the case of already closed or converted plant, please provide capacity in the respective year.

**Part II : Additional information on individual mercury cell chlor alkali plants for 2015**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity	Purchases / Sales <sup>2</sup>	Consumption / Use	Emission to Air	Emission to Water	Emission to Soil	Total emissions	Solid Waste	Mercury Currently at the Plant [exclude wastes]
Name and contact information in the plant	In 1000 t <sup>3</sup>	kg Hg /y	Kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	Kg Hg /y	kg Hg /y	t
Quimpac*(sumatoria de dos plantas similares)			4.6			1.32	1.32		

<sup>2</sup> Indicate as (-) if sold

<sup>3</sup> In thousands of metric tons of chlorine capacity

**PERU**

Name of Respondent: Vilma Morales Q.

Email: vmorales@minam.gob.pe

Agency /Institution: Ministerio del Ambiente

Phone number: +51 1 611 6000 Anexo 1720

**Part I: Basic Information on individual mercury chlor alkali plants for 2015:**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity <sup>4</sup>	Status of chlor alkali plant Closure or Conversion to Non-Mercury Technology ? (Please Provide Details and the Date)			Estimated Quantities of Elemental Mercury stored on site or to be decommissioned  t
		Done	In Progress	Planned	
Name and Contact Information in the plant	In 1000 t				
Quimpac* (sumatoria de dos plantas similares)	116.7	-	-	SI	TBD**

\*TBD: To be determined

\*\* Información proporcionada por Isaias Flit, Asesor del Presidente - QUIMPAC S.A.

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<sup>4</sup> In the case of already closed or converted plant, please provide capacity in the respective year.

**Part II : Additional information on individual mercury cell chlor alkali plants for 2015**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity	Purchases / Sales <sup>5</sup>	Consumption / Use	Emission to Air	Emission to Water	Emission to Soil	Total emissions	Solid Waste	Mercury Currently at the Plant [exclude wastes]
Name and contact information in the plant	In 1000 t <sup>6</sup>	kg Hg /y	Kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	Kg Hg /y	kg Hg /y	t
Quimpac*(sumatoria de dos plantas similares)	116.7	0.0	627.0	0.02	0.62	TBD**	0.64	11.98	175.9

\*TBD: To be determined

\*\* Información proporcionada por Isaias Flit, Asesor del Presidente - QUIMPAC S.A.

<sup>5</sup> Indicate as (-) if sold

<sup>6</sup> In thousands of metric tons of chlorine capacity

**ROMANIA** Name of Respondent: Mihaela Epure

Email: [mihaela.epure@oltchim.com](mailto:mihaela.epure@oltchim.com)

Agency /Institution: OLTCHIM SA

Phone number: +40250701220

**Part I: Basic Information on individual mercury chlor alkali plants for 2015:**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity <sup>7</sup>	Status of chlor alkali plant Closure or Conversion to Non-Mercury Technology? (Please Provide Details and the Date)			Estimated Quantities of Elemental Mercury stored on site or to be decommissioned
		Done	In Progress	Planned	
Name and Contact Information in the plant	In 1000 t				t
Doina Dobre <a href="mailto:doina.dobre@oltchim.com">doina.dobre@oltchim.com</a>	0	Close for conversion to non-mercury technology			158.060

<sup>7</sup> In the case of already closed or converted plant, please provide capacity in the respective year.

**Part II: Additional information on individual mercury cell chlor alkali plants for 2015**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity	Purchases / Sales <sup>8</sup>	Consumption / Use	Emission to Air	Emission to Water	Emission to Soil	Total emissions	Solid Waste	Mercury Currently at the Plant [exclude wastes]
Name and contact information in the plant	In 1000 t <sup>9</sup>	kg Hg /y	Kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	Kg Hg /y	kg Hg /y	t

<sup>8</sup> Indicate as (-) if sold

<sup>9</sup> In thousands of metric tons of chlorine capacity

**SERBIA:** Name of Respondent: Sonja Roglic

Email: sonja.roglic@eko.minpolj.gov.rs

Agency /Institution: Ministry of Agriculture and Environmental Protection

Phone number: +381(0)11 71 55 203

**Part I: Basic Information on individual mercury chlor alkali plants for 2015 :**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity <sup>10</sup>	Status of chlor alkali plant Closure or Conversion to Non-Mercury Technology ? (Please Provide Details and the Date)			Estimated Quantities of Elemental Mercury stored on site or to be decommissioned  t
		Done	In Progress	Planned	
<p>HIP-Petrohemija a.d. Pancevo "Electrolysis" Phone: +381 (0) 13 30 70 00 +381 (0) 13 307 155 E-mail: info@hip- petrohemija.rs</p>	<p><b>Final product:</b> -18 000 t HCl -6 200 t NaOH (100%) -1 600 t NaOCl, <b>Chlorine is intermediate product Capacity (max) 6 500 t</b></p>	/	/	/	The number of cells (Olin E-812) is 5, appromatly 14 t, and 480 kg mercury at the stocks
<p>Chemical Industry "Župa" sc in restructuring „Electrolytic products – KCl “ Phone: +381 (0) 37 424 476 Fax: +381 (0) 37 423 277</p>	<p>Designed capacity 4000t (produced only 4 t chlorine)</p>	/	/	/	12.4

<sup>10</sup> In the case of already closed or converted plant, please provide capacity in the respective year.

**Part II : Additional information on individual mercury cell chlor alkali plants for 2015**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity	Purchases / Sales <sup>11</sup>	Consumption / Use	Emission to Air	Emission to Water	Emission to Soil	Total emissions	Solid Waste	Mercury Currently at the Plant [exclude wastes]
Name and contact information in the plant	In 1000 t <sup>12</sup>	kg Hg /y	Kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	Kg Hg /y	kg Hg /y	t
HIP- Petrohemija a.d. Pancevo "Electrolysis" Phone: +381 (0) 13 30 70 00 +381 (0) 13 307 155 E-mail: info@hip- petrohemija.rs	<b>Final product:</b> -18 000 t HCl -6 200 t NaOH (100%) -1 600 t NaOCl, <b>Chlorine is intermediate product</b> <b>Capacity (max)</b> <b>6 500 t</b>	/	Consumption 730 kg/year	0	4,69	/	/	2500 kg/year (sludge contaminated with Hg) Total amount of sludge = 62,400 kg 5284 t (sludge contaminated with Hg at the landfill in the company)	14, 483

<sup>11</sup> Indicate as (-) if sold

<sup>12</sup> In thousands of metric tons of chlorine capacity



<p>Chemical Industry  "Župa"sc  „Electrolytic products – KCl“  <b>bankruptcy</b>  Phone  : +381 (0) 37 424 476  Fax: +381 (0) 37 423 277  <a href="mailto:zupahi@open.t">zupahi@open.t</a>  <a href="http://elekom.rs">elekom.rs</a></p>	<p>Designed capacity 4000t (produced only 4 t chlorine)</p>	/	/	/	/	/	/	No official data available	12.4
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**SYRIA** Name of Respondent:

**Eng FAROUK ALETER**

Email:

F. [aleter@yahoo.com](mailto:aleter@yahoo.com)/ [Fa.aleter@hotmail.com](mailto:Fa.aleter@hotmail.com)

Agency /Institution:

**Ministry of State for Environment Affairs**

Phone number: **++963 944 496 270**

**Part I: Basic Information on individual mercury chlor alkali plants for 2015:**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity <sup>13</sup>	Status of chlor alkali plant Closure or Conversion to Non-Mercury Technology ? (Please Provide Details and the Date)			Estimated Quantities of Elemental Mercury stored on site or to be decommissioned  t
		Done	In Progress	Planned	
Name and Contact Information in the plant	In 1000 t				
Quimpac* (sumatoria de dos plantas similares)		-	-		
<b>Eng. FAROUK ALETER</b> SAICM focal point Ministry of State for Environment Affairs Damascus/Syrian Arab Republic f.aleter@yahoo.com Fa.aleter@hotmail.com		<b>Plant Closed</b>			

\*TBD: To be determined

\*\* Información proporcionada por Isaias Flit, Asesor del Presidente - QUIMPAC S.A.

<sup>13</sup> In the case of already closed or converted plant, please provide capacity in the respective year.

**Part II : Additional information on individual mercury cell chlor alkali plants for 2015**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity	Purchases / Sales <sup>14</sup>	Consumption / Use	Emission to Air	Emission to Water	Emission to Soil	Total emissions	Solid Waste	Mercury Currently at the Plant [exclude wastes]
Name and contact information in the plant	In 1000 t <sup>15</sup>	kg Hg /y	Kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	Kg Hg /y	kg Hg /y	t
Quimpac*(sumatoria de dos plantas similares)									

\*TBD: To be determined

\*\* Información proporcionada por Isaias Flit, Asesor del Presidente - QUIMPAC S.A.

<sup>14</sup> Indicate as (-) if sold

<sup>15</sup> In thousands of metric tons of chlorine capacity

**CUBA** Name of Respondent : Martha Sentí Darias

Email : [senti@citma.cu](mailto:senti@citma.cu)

Agency /Institution : Ministerio de Ciencia, Tecnología y Medio Ambiente

Phone number : 8355566 – 71 ext. 133

**Part I: Basic Information on individual mercury chlor alkali plants for 2015 :**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity <sup>16</sup>	Status of chlor alkali plant Closure or Conversion to Non-Mercury Technology ? (Please Provide Details and the Date)			Estimated Quantities of Elemental Mercury stored on site or to be decommissioned  t
		Done	In Progress	Planned	
Magalis Torres Martínez Esp. Medio Ambiente Planta Cloro Sosa	NaOH al 100 %= 40 t/day Cl <sub>2</sub> gas= 35 t/day Cl <sub>2</sub> liq= 21.3 t/day NaOCl= 80 t/day HCl= 35 t/day  (future production capacity of the new plant)		The investment to reconvert the plant in a mercury-free technology is in process, is at 30% execution.  The start of the new plant is predicted for the year 2017.		2553 kg end of 2015

<sup>16</sup> In the case of already closed or converted plant, please provide capacity in the respective year.

**Part II : Additional information on individual mercury cell chlor alkali plants for 2015**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity	Purchases / Sales <sup>17</sup>	Consumption / Use	Emission to Air	Emission to Water	Emission to Soil	Total emissions	Solid Waste	Mercury Currently at the Plant [exclude wastes]
Name and contact information in the plant	In 1000 t <sup>18</sup>	kg Hg /y	Kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	Kg Hg /y	kg Hg /y	t
Magalis Torres Martínez Esp. Medio Ambiente Planta Cloro Sosa	NaOH al 50 %= 108 t/day Cl2 gas= 48 t/day Cl2 liq= 43 t/day / NaOCl= 80 t/day HCl= 60 t/día  (maximum capacity of the actual plant) *	16762.5 **	14209.5	***5.37	103.01	No ****	108.38	565.84	2.553

<sup>17</sup> Indicate as (-) if sold

<sup>18</sup> In thousands of metric tons of chlorine capacity


\* The technical conditions of the plant after 35 years of operation and the lack of timely financing to carry out maintenance have prevented these capacities from being reached in addition to the existing limitation with the demand for chlorinated products in our country.

\*\* In the year 2015 bought 16762.5 kg of mercury. The historical consumption index is around 6 t / year which has been affected in the last years due to the technical conditions of the main equipment and the presence of heavy metals in the salt that propitiates great losses of mercury in the form of butters Which is not recoverable at 100%.

\*\*\* In air emissions only hydrogen is considered to be released into the atmosphere as a surplus of the production process, because it cannot be quantified the values that evaporate in other parts of the process as a result of the physico-chemical properties of this substance.

\*\*\*\* There are no emissions to the soil, unless there is leakage of contaminated water, so they are not monitored.



**PHILLIPINES**

Name of Respondent : Patrick Cristobal

Email : hazwaste.embco@gmail.com

Agency /Institution : DENR-EMB

Phone number : (632) 9281212

**Part I: Basic Information on individual mercury chlor alkali plants for 2015 :**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity <sup>1</sup>	Status of chlor alkali plant Closure or Conversion to Non-Mercury Technology ? (Please Provide Details and the Date)			Estimated Quantities of Elemental Mercury stored on site or to be decommissioned  t
		Done	In Progress	Planned	
<p><b>Superior Gas and Equipment Company (SUGECO)</b> Address: P. Martinez St., Barangay Daang Bakal, Mandaluyong City Office: Sandoval Ave., Pasig Metro Manila Email: <a href="http://www.sugeco.net/">http://www.sugeco.net/</a> Tel: (632) 531-8021 to 26</p>	<p>0 (No Information of previous capacity)</p>	<p>Ceased Operation (before Year 2000)</p>			N/A
<p><b>Ajinomoto Philippines</b> Address: E. Rodriguez Ave., Ugong, Pasig City Office: 139 Corporate Center, Valero, Makati, Metro Manila Email: <a href="http://www.ajinomoto.com.ph/">http://www.ajinomoto.com.ph/</a> Tel: 0917 552 8304</p>	<p>0 (No Information of previous capacity)</p>	<p>Ceased Operation (September 2007)</p>			N/A
<p><b>Mabuhay Vinyl Corporation</b> Address: Assumption Heights, Burun, Iligan City Office: 139 Corporate Center, Valero, Makati, Metro Manila</p>	<p>Ion Exchange Membrane Chlor Alkali Plant Capacity 6000 MT/Year</p>	<p>Convert to Ion Exchange  (Since 1993)</p>			N/A

<sup>1</sup> In the case of already closed or converted plant, please provide capacity in the respective year.

Email: [edilbertobayor@yahoo.com.ph](mailto:edilbertobayor@yahoo.com.ph)

Tel: (632) 223-6794

**Part II : Additional information on individual mercury cell chlor alkali plants for 2015**

Mercury Cell Chlor Alkali Plant	Mercury Cell Chlorine Capacity	Purchases / Sales <sup>2</sup>	Consumption / Use	Emission to Air	Emission to Water	Emission to Soil	Total emissions	Solid Waste	Mercury Currently at the Plant [exclude wastes]
Name and contact information in the plant	In 1000 t <sup>3</sup>	kg Hg /y	Kg Hg /y	kg Hg /y	kg Hg /y	kg Hg /y	Kg Hg /y	kg Hg /y	t
<b>Mabuhay Vinyl Corporation</b> Ion Exchange Membrane Chlor Alkali Plant									
IEM-Plant 1	N/A	None	None	None	Effluent Water Hg=0.112ppb	None	-	BFLs 50-90 Kg bulbs/year	N/A
IEM-Plant 2	6000MT/Year	None	None	None	Effluent Water Hg=0.054ppb	None	-		N/A

<sup>2</sup> Indicate as (-) if sold

<sup>3</sup> In thousands of metric tons of chlorine capacity