

# Extract of HUMAN's Environmental Statement 2023 (for period 2018-2022)

## 1. Introduction

Company HUMAN Gesellschaft für Biochemica und Diagnostica mbH (HUMAN) is a globally acting manufacturer of in-vitro-diagnostic (IVD) reagents and devices. Offering a broad product portfolio and a distribution and service network in more than 150 countries, HUMAN represents a leading supplier within the international diagnostics market.

The portfolio focuses on clinical diagnostics as well as on hematology, ELISA, and autoimmune assays.

Founded 1972 in Germany, HUMAN has continuously grown and currently employs approximately 270 staff at sites in Wiesbaden and Magdeburg. Additionally, HUMAN operates sales and service offices in India, PR China, UAE, Ethiopia, Panama, and Singapore. Since 2004, HUMAN was part of Dr. Schmidt Biotech Group, which has been renamed in olicoo Diagnostics in August 2019. In 2013, German IVD analyzer producer LABiTec GmbH, located close to Hamburg, was acquired.

'Made in Germany' is HUMAN's promise to quality. Research & development and modern manufacturing conditions in Germany are basis for growth, which is part of HUMAN's philosophy.

HUMAN complies with all applicable European Directives and Ordinances and therefore stands for product reliability and quality also outside of Europe.

Following the mission to offer reliable diagnostics in good quality for attractive prices HUMAN presents one of the most important players outside of Western Europe, Japan, and the USA. Sales focus by 98% on emerging and developing countries. HUMAN operates a network comprising more than 150 distributing partners and 6 own sales and service offices ensuring local client support. HUMAN is also well-approved supplier of many international NGOs.

HUMAN's business characteristics overview:

- Global player on in-vitro-diagnostics (IVD) sector offering a broad portfolio of laboratory diagnostic products.
- R&D and manufacturing with focuses on clinical chemistry, ELISA, hematology, as well as rapid tests and autoimmune assays.
- 3 sites in Germany: Wiesbaden (headquarters), Magdeburg (manufacture and R&D) and Ahrensburg close to Hamburg (subsidiary LABiTec).
- Sales focus on emerging and developing with sales network including more than 150 countries.

Being a manufacturer of IVD, HUMAN is regulated by the European IVD Regulation. Company HUMAN as manufacturer as well as the CE labeled products are registered at and supervised by the German pertinent authorities.

HUMAN's success is based on compliance with regulatory obligations and customer fulfillment. The long-term established quality management system, which is certified according to ISO 9001 and ISO 13485, represents a key pre-condition.

As owner, management and employees of HUMAN feel dedicated to environmental protection, an integrated environmental management system according to ISO 14001 and EMAS III (1221/2009/EC) was implemented in 2015 and maintained since then at the main sites in Wiesbaden and Magdeburg.

#### Environmental milestones for the Wiesbaden site:

- 2005: Renovation of heating and ventilation system of older building part
- 2009: Completion of new building part
- 2009: Installation of a geothermal unit for heating and air-conditioning within the new building part (heating capacity: 273 kW, cooling capacity: 233 kW)
- 2009: Installation of photovoltaic modules on new building part (peak capacity: 44 kW)
- 2009: Use of 50% renewable electricity
- 2010-2013: Interior modernization of old building part
- 2011: Roof renovation
- 2012: New cooling system for warehouse
- 2014: Use of 100% renewable electricity
- 2015: Installation of photovoltaic modules on old building part (peak capacity: 47 kW)  
Certification according to ISO 14001 und EMAS III
- 2017: Installation of chargers for E-Cars and E-Bikes
- 2017: Installation of LED lighting in parts of the warehouse
- 2018: First company plug-in-hybrid vehicles in use
- 2018: EMAS and ISO 14001 Re-certification (2015 standard version)
- 2019: Expansion of LED illumination
- 2020+2022: Installation of additional E-Car charging stations
- 2023: Start of extension of geothermal unit for heating of the old building part

Environmental milestones for the Magdeburg site:

- 2012: Use of 50% renewable electricity
- 2013: Installation of photovoltaic modules (peak capacity: 60 kW) and solar thermal unit (capacity: 15 kW) on the new building part
- 2013: LED illumination in new building part
- 2014: Use of 100% renewable electricity
- 2014: Illumination conversion to LED in old building part
- 2015: Certification according to ISO 14001 und EMAS III
- 2016: Eco-Modernization (reduced electricity consumption) of major climate control unit
- 2018: Expansion of present photovoltaic unit from 60 kW to ca. 99 kW peak capacity on the new building part
- 2018: LED illumination in production area (old building part) with savings potential of approximately 65%
- 2018: EMAS and ISO 14001 Re-certification (2015 standard version)
- 2019: Replacement of piston compressors by screw compressors
- 2020: Installation of chargers for E-Cars, first Plug-In-Hybrid company cars
- 2022/23: Installation of additional E-Car charging stations

## 2. Environmental Policy

Expressing entrepreneurial responsibility, owner, management, and employees of HUMAN feel highly obliged to the sustainable use of natural resources and environmental protection including the prevention of environmental impacts beyond HUMAN's company boundaries.

Therefore, a certified environmental management system for all sites is established and maintained, which implements the requirements of the International Standard ISO 14001 and the European EMAS Directive. According to these requirements Human reviews the environmental management system regularly regarding HUMAN's obligation for continuous improvement of the environmental performance.

The environmental policy of HUMAN is characterized by its environmental guidelines. Environmental management measures are regularly aligned with the environmental policy and attached guidelines.

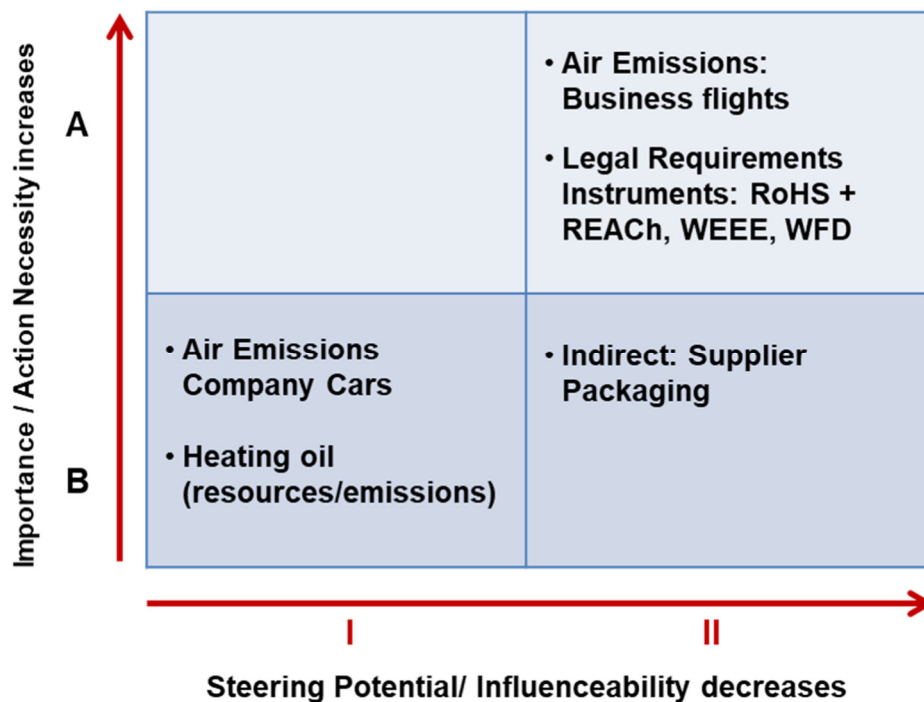
Guidelines:

- Compliance with all applicable environmental laws and regulations and other binding obligations of the Company are jointly guaranteed by all parties involved.
- In the design of business processes preferably renewable resources are used. The proportion of renewable energy generated at the HUMAN locations is increased to the extent possible.
- Decisions on investments, suppliers, products, intermediates, and raw materials include environmental effects.
- The planning of business travel and logistics accounts for steady reduction of the ecological footprint as well as attenuation of the climate change, as far as technically and economically feasible.
- The management of hazardous substances is designed such that the risk of environmental damage is minimized - including emergency situations.
- HUMAN employees are actively involved in the definition and implementation of measures to improve environmental performance.
- Suppliers and contractors are requested to consider the HUMAN environmental policy.
- HUMAN openly publishes information on environmental performance and welcomes suggestions from the public.
- Continuous improvement of the environmental management system and of the environmental performance is considered obligatory.

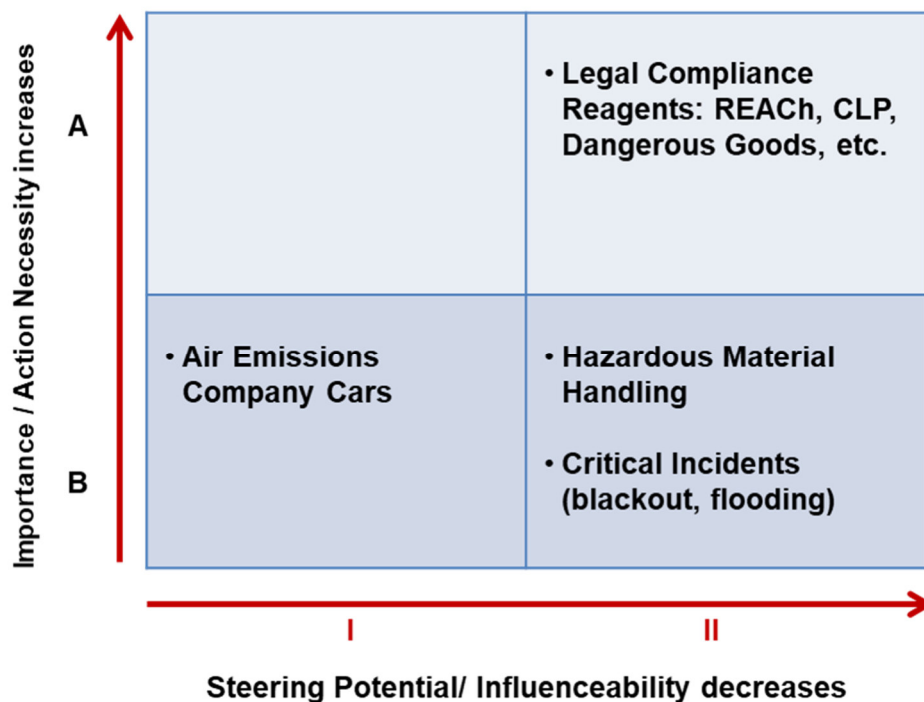
## 3. Environmental Aspects

The following environmental aspects are currently considered important at the HUMAN subject sites:

### Wiesbaden Site



### Magdeburg Site



## 4. Important Environmental Objectives 2020/2021

Objective	Action	Goal
CO <sub>2</sub> -Emissions generated by business flights	⇒ Expenditure of at minimum 20.000 EUR/a for nature preserve sponsoring	<u>Goal achieved for 2022.</u> <i>Nature preserve sponsoring for foundations NABU Barleben e.V. and Michael Succow (20 k€ each). Sponsoring will be continued in 2023.</i>
Reduction of emissions generated by business travel (automotive)	⇒ Reduction of diesel fuel consumption by increased lease of Plug-In hybrid and fully electric company cars (Plug-In hybrids must be driven at least 50% electrically)	<i>50 % Plug-In hybrid and fully electric company cars until end of 2022</i> <i>Status August 2022: 1 fully electric + 11 Plug-in hybrids out of 33 company cars in total (ca. 40 %) + 2 further Plug-in Hybrids ordered</i> <i>Status July 2023: 5 fully electric + 13 Plug-in hybrids out of 32 company cars in total (ca. 56 %)</i> <u>Goal achieved.</u>
Reduction of electricity consumption (i.e., by LED technology)	⇒ <b>Reduction &lt; 12 kWh/T€</b> at Wiesbaden site ⇒ <b>Reduction &lt; 30 kWh/T€</b> at Magdeburg site	<i>To be achieved until end of 2022.</i> <i>Status 2021:</i> <i>WI – 9.5 kWh/T€ - achieved</i> <i>MD – 23.8 kWh/T€ - achieved</i>
Reduction of heating oil consumption at Wiesbaden site	⇒ <b>Reduction &lt; 4,6 kWh/TEUR</b>	<i>To be achieved until end of 2021.</i> <i>Status 2020: 4.3 kWh/TEUR – achieved</i> <i>Status 2021: 3.4 kWh/TEUR – achieved</i> <i>Status 2022: 3.3 kWh/TEUR - achieved</i>
Reduction Emissions generated / Renewable Energies	⇒ Installation of an additional E-Car charging station to increased demand	<i>Wiesbaden - Annual Goal: Consumption of at minimum 15,000 kWh green electricity for company and private car charging (Plug-In-Hybrids and E-Cars), which would lead to a decreasing use of fossil fuels</i> <i>Status 2021: 19.015 kWh – achieved</i> <i>Status 2022: 37.611 kWh – achieved</i> <i>Magdeburg - Annual Goal: Consumption of at minimum 5,000 kWh starting 01.01.2023</i>
Supplier Packaging of devices and spare parts	⇒ Discussion/negotiation with most problematic suppliers (2-3)	<i>Packaging improvement (material, amount) – Reduction of foam sheeting up to 20% until end of 31.12.2022</i> <i>Status 2023: <u>Goal not achieved!</u> The quantity of foam sheeting increased by 10% in comparison to the former year due to increased sales. An alternative packaging material has not been offered and used by any of the contacted suppliers.</i>

<i>Objective</i>	<i>Action</i>	<i>Goal</i>
<b>Reduction Emissions generated / Renewable Energies at Wiesbaden site</b>	⇒ Expansion of geothermal unit, decommissioning of oil heating unit	<b><i>Emission reduction of 50t CO<sub>2</sub>/a starting 01.01.2025</i></b> <b><i>Status July 2023: Authority Permitting Phase</i></b>

## 5. Environmental Performance

Bold data are key indicators according to EMAS III.

### Wiesbaden Site

Energy, Water and Material Consumption

Key figures	Unit	2018	2019	2020	2021	2022
Electricity	MWh	614.71	596.90	577.67	625.00	572.95
Electricity /Turnover	kWh/kEUR	11.89	11.10	11.76	9.77	9.48
Electricity /Employee (Emp)	MWh/Emp	4.13	3.78	3.46	3.93	3.45
Heating Energy	MWh	240.92	254.60	210.94	220.00	201.11
Heating Energy /Turnover	kWh/kEUR	4.66	4.73	4.29	3.44	3.33
Heating Energy /Employee	MWh/Emp	1.62	1.61	1.26	1.38	1.21
Diesel (for business rides)	MWh	44.73	42.74	24.85	29.82	29.79
Diesel /Turnover	kWh/TEUR	0.87	0.80	0.51	0.47	0.49
Total Energy Consumption	MWh	900.36	894.25	788.61	874.87	803.88
<b>Total Energy Consumption/ Turnover</b>	<b>kWh/kEUR</b>	<b>17.41</b>	<b>16.63</b>	<b>16.05</b>	<b>13.68</b>	<b>13.31</b>
<b>Total Energy Consumption/ Employee</b>	<b>MWh/Emp</b>	<b>6.04</b>	<b>5.66</b>	<b>4.87</b>	<b>5.52</b>	<b>4.84</b>
On-site generation of geothermal energy (less electricity consumption of heat pump)	MWh	712.04	840.14	838.72	896.04	822.89
Additional generated and used electricity from photovoltaic modules	MWh	52.96	44.18	50.03	48.19	54.07
Total Use of Renewable Energy (proportion of Green Electricity and geothermal energy)	MWh	1379.71	1481.22	1466.42	1569.23	1449.90
<b>Proportion of Renewable Energy Use out of the Total Energy Use</b>	<b>%</b>	<b>82.85</b>	<b>83.28</b>	<b>86.15</b>	<b>86.27</b>	<b>86.26</b>
Additional generated Electricity from further photovoltaic modules (not used on-site)	MWh	50.06	48.0	48.72	46.10	51.53
Total Water Consumption	m <sup>3</sup>	1668	1044	964	623	710
<b>Total Water Consumption/ Turnover</b>	<b>l/kEUR</b>	<b>32.25</b>	<b>19.41</b>	<b>19.62</b>	<b>9.74</b>	<b>11.75</b>
<b>Total Water Consumption/ Employee</b>	<b>m<sup>3</sup>/Emp</b>	<b>11.20</b>	<b>6.61</b>	<b>5.77</b>	<b>3.92</b>	<b>4.28</b>
Paper Consumption	t	3.50	2.00	0.80	2.00	2.00
<b>Paper Consumption/Turnover</b>	<b>g/kEUR</b>	<b>67.67</b>	<b>37.19</b>	<b>16.28</b>	<b>31.27</b>	<b>33.11</b>
<b>Paper Consumption/Employee</b>	<b>kg/Emp</b>	<b>23.49</b>	<b>12.66</b>	<b>4.79</b>	<b>12.58</b>	<b>12.05</b>

Non-hazardous waste

Key figures	Unit	2018	2019	2020	2021	2022
Total Non-hazardous Waste Generation	t	53.56	61.53	58.25	44.55	52,28
<b>Total Waste Generation/Turnover</b>	<b>g/kEUR</b>	<b>1035.46</b>	<b>1144.04</b>	<b>1185,56</b>	<b>682.38</b>	<b>865.40</b>
<b>Total Waste Generation/ Employee</b>	<b>kg/Emp</b>	<b>359.43</b>	<b>389.43</b>	<b>348.80</b>	<b>274.53</b>	<b>314.94</b>



## Hazardous waste

<i>Key figures</i>	<i>Unit</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>2021</i>	<i>2022</i>
Total Hazardous Waste Generation	t	6.21	5.62	6.05	4.89	5.18
<b>Total Hazardous Waste Generation/Turnover</b>	<b>g/kEUR</b>	<b>120.01</b>	<b>104.49</b>	<b>123.16</b>	<b>76.45</b>	<b>85.75</b>
<b>Total Hazardous Waste Generation/Employee</b>	<b>kg/Emp</b>	<b>41.66</b>	<b>35.57</b>	<b>36.23</b>	<b>30.76</b>	<b>31.21</b>

## Air Emissions

<i>Key figures</i>	<i>Unit</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>2021</i>	<i>2022</i>
Greenhouse Gases	t CO <sub>2</sub> -eq.	479.70	511.10	161.82	255.78	293.13
Greenhouse Gases (without business flights)	t CO <sub>2</sub> -eq.	79.62	81.42	108.36	68.70	63.64
<b>Total Greenhouse Gases/Turnaround</b>	<b>kg CO<sub>2</sub>-eq./kEUR</b>	<b>9.28</b>	<b>9.50</b>	<b>3.29</b>	<b>3.99</b>	<b>4.98</b>
<b>Total Greenhouse Gases/Employee</b>	<b>kg CO<sub>2</sub>-eq./Emp</b>	<b>3.22</b>	<b>3.24</b>	<b>0.97</b>	<b>1.61</b>	<b>1.81</b>
NO <sub>x</sub> Emissions	kg	1692.93	1816.09	247.33	803.54	1.010.71
<b>NO<sub>x</sub> Emissions/Turnover</b>	<b>g/kEUR</b>	<b>32.73</b>	<b>33.77</b>	<b>5.03</b>	<b>5.04</b>	<b>16.73</b>
SO <sub>2</sub> Emissions	kg	1302.04	1397.65	168.48	627.07	782.64
<b>SO<sub>2</sub> Emissions/Turnover</b>	<b>g/kEUR</b>	<b>25.17</b>	<b>25.99</b>	<b>3.43</b>	<b>9.80</b>	<b>12.96</b>
PM 10 Emissions	kg	28.82	30.43	10.47	17.27	19.04
<b>PM 10 Emissions/Turnover</b>	<b>g/kEUR</b>	<b>0.58</b>	<b>0.57</b>	<b>0.21</b>	<b>0.27</b>	<b>0.32</b>

## Magdeburg Site

### Energy, Water and Material Consumption

Key figures	Unit	2018	2019	2020	2021	2022
Electricity	MWh	1056.87	1028.95	975.15	900.31	895.91
Electricity/Product water	kWh/l	1.11	1.07	1.19	0.90	0.83
Electricity/Employee	MWh/Emp	8.38	8.17	7.93	8.19	7.79
Heating Energy	MWh	1099.75	903.64	853.42	1269.60	1140.76
Heating Energy/Product water	kWh/l	1.15	0.94	1.04	1.26	1.06
Heating Energy/Employee	MWh/Emp	8.72	7.17	6.94	11.54	9.92
Diesel (for business rides)	MWh	17.40	14.91	13.51	14.91	14.97
Diesel/Product water	kWh/TEUR	0.55	0.44	0.46	0.35	0.39
Total Energy Consumption	MWh	2156.62	1932.59	1842.08	2169.91	2051.58
<b>Total Energy Consumption/ Product water</b>	<b>kWh/l</b>	<b>2.28</b>	<b>2.03</b>	<b>2.25</b>	<b>2.17</b>	<b>1.91</b>
<b>Total Energy Consumption/ Employee</b>	<b>MWh/Emp</b>	<b>17.25</b>	<b>15.46</b>	<b>14.98</b>	<b>19.86</b>	<b>17.84</b>
Electricity generated by photovoltaic (PV) unit	MWh	95.00	15.46	92.39	84.02	91.04
Total Use of Renewable Energy (proportion of Green Electricity and PV electricity)	MWh	1151.87	1121.73	1067.54	984.33	987.01
<b>Proportion of Renewable Energy Use out of the Total Energy Use</b>	<b>%</b>	<b>50.77</b>	<b>55.38</b>	<b>55.19</b>	<b>43.39</b>	<b>46.24</b>
Total Water Consumption	m <sup>3</sup>	7212	7267	5837	5981	6856
<b>Total Water Consumption/Product Water</b>	<b>factor</b>	<b>7.56</b>	<b>7.56</b>	<b>7.12</b>	<b>5.95</b>	<b>6.37</b>
<b>Total Water Consumption/ Employee</b>	<b>m<sup>3</sup>/Emp</b>	<b>57.24</b>	<b>57.68</b>	<b>47.46</b>	<b>54.37</b>	<b>59.62</b>
Paper Consumption	t	14.0	15.7	15.8	19.5	17.1
<b>Paper Consumption/Product Water</b>	<b>g/l</b>	<b>444.14</b>	<b>465.73</b>	<b>531.93</b>	<b>458.96</b>	<b>450.86</b>
<b>Paper Consumption/Employee</b>	<b>kg/Emp</b>	<b>111.11</b>	<b>124.60</b>	<b>128.46</b>	<b>177.27</b>	<b>148.70</b>

### Non-hazardous waste

Key figures	Unit	2018	2019	2020	2021	2022
Total Non-hazardous Waste Generation	t	54.45	55.27	55.68	54.64	60.68
<b>Total Waste Generation/ Product Water</b>	<b>g/l</b>	<b>57.06</b>	<b>59.01</b>	<b>67.90</b>	<b>54.35</b>	<b>56.34</b>
<b>Total Waste Generation/ Employee</b>	<b>m<sup>3</sup>/Emp</b>	<b>57.24</b>	<b>57.68</b>	<b>452.68</b>	<b>496.73</b>	<b>527.65</b>

### Hazardous waste

Key figures	Unit	2018	2019	2020	2021	2022
Total Hazardous Waste Generation	t	26.27	24.22	21.47	23.44	24.88
<b>Total Hazardous Waste Generation/Product Water</b>	<b>g/l</b>	<b>27.54</b>	<b>25.20</b>	<b>26.18</b>	<b>23.32</b>	<b>23.10</b>
<b>Total Hazardous Waste Generation/Employee</b>	<b>kg/Emp</b>	<b>208.49</b>	<b>192.22</b>	<b>174.55</b>	<b>213.09</b>	<b>216.35</b>

## Air Emissions

<i>Key figures</i>	<i>Unit</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>2021</i>	<i>2022</i>
Greenhouse Gases	t CO <sub>2</sub> -eq.	238.70	199.87	189.77	277.06	249.61
<b>Total Greenhouse Gases/ Product Water</b>	<b>kg CO<sub>2</sub>- eq./m<sup>3</sup></b>	<b>250.21</b>	<b>207.98</b>	<b>231.03</b>	<b>275.68</b>	<b>231.77</b>
<b>Total Greenhouse Gases/ Employee</b>	<b>kg CO<sub>2</sub>- eq./Emp</b>	<b>1.89</b>	<b>1.59</b>	<b>1.54</b>	<b>2.52</b>	<b>2.17</b>
NO <sub>x</sub> Emissions	kg	94.07	77.35	73.25	106.66	96.24
<b>NO<sub>x</sub> Emissions/Product Water</b>	<b>g/m<sup>3</sup></b>	<b>98.61</b>	<b>80.49</b>	<b>89.33</b>	<b>106.02</b>	<b>89.36</b>
SO <sub>2</sub> Emissions	kg	1.40	1.06	0.96	1.44	1.28
<b>SO<sub>2</sub> Emissions/Product Water</b>	<b>g/m<sup>3</sup></b>	<b>1.47</b>	<b>1.10</b>	<b>1.17</b>	<b>1.43</b>	<b>1.19</b>
PM 10 Emissions	kg	13.02	10.38	9.67	14.10	12.68
<b>PM 10 Emissions/Product Water</b>	<b>g/m<sup>3</sup></b>	<b>13.65</b>	<b>10.80</b>	<b>11.79</b>	<b>14.03</b>	<b>11.77</b>

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