



Opinion Statement



Water Footprint

Verification Opinion Statement

This is to verify that: TCC Group Holdings CO., LTD.
No. 113, Sec. 2, Zhongshan N. Rd.
Zhongshan Dist.
Taipei City
104414
Taiwan

臺灣水泥股份有限公司
臺灣
台北市
中山區
中山北路二段 113 號
104414

Holds Statement No: WFV 818682

Verification opinion statement

As a result of carrying out the verification of water footprint assessment, it is the opinion of BSI with reasonable assurance that:

- This verification is according to the water footprint assessment report of TCC Group Holdings CO., LTD.
- The system boundary is defined as an organizational boundary by operational control approach.
- No material misstatements in this ISO 14046:2014 assertion was revealed.

The data quality of water footprint assessment was verified to be acceptable against the requirements of ISO 14046:2014.

This statement shall be valid for a maximum period of two years after the latest issue date on this certificate. Should there be a change in the life cycle of the water footprint are being assessed, the validity of this opinion statement will cease.

For and on behalf of BSI:

Managing Director BSI Taiwan, Peter Pu

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Location	Verification Information
TCC Group Holdings CO., LTD. No. 113, Sec. 2, Zhongshan N. Rd. Zhongshan Dist. Taipei City 104414 Taiwan 臺灣水泥股份有限公司 臺灣 台北市 中山區 中山北路二段 113 號 104414	This verification is according to the water footprint assessment report of TCC Group Holdings CO., LTD.

The water footprint assessment declaration and other related information are as follows:

- The water footprint assessment within organizational boundary
- The inventory data in this water footprint assessment report is from 2024-01-01 to 2024-12-31.
- The site-specific data include related facilities listed below from its own processes under the operational control of the organization and individual processes under the financial or operational control of the organization undertaking the water footprint assessment study.
 - TCC Taipei Plant (No. 310, Sec. 1, Datong Rd., Xizhi Dist., New Taipei City 221006, Taiwan)
 - TCC Taipei Plant Taoyuan Branch (No. 220, Sec. 2, Nanshan Rd., Luzhu Dist., Taoyuan City 338020, Taiwan)
 - Taichung Plant (No. 785, Sec. 3, Zhongqing Rd., Daya Dist., Taichung City 428412, Taiwan)
 - Kaohsiung Plant (No.16, Gongye 1st Rd., Renwu Dist., Kaohsiung City 814036, Taiwan)
 - Kaohsiung Plant Tainan Branch (No.36, Taiyi 7th St., Rende Dist., Tainan City 717019, Taiwan)
- The qualification methodology for water footprint assessment by Environmental Footprint 3.1 Version1.01 approach.

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Taiwan Headquarters: 2nd Floor, No.37, Ji-Hu Road Nei-Hu Dist., Taipei 11492, Taiwan, R.O.C.
A Member of the BSI Group of Companies.

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Location

TCC Taipei Plant
No. 310, Sec. 1, Datong Rd., Xizhi Dist., New Taipei City 221006, Taiwan
臺灣水泥股份有限公司台北水泥製品廠
221006 新北市汐止區大同路一段 310 號

Water withdrawal			Impact indicator results		
Resource Type	Quantities	Unit	Impact Category	Quantities	Unit
Tap water	44,418.04	M³/Year	Acidification	293.900	molc H+ eq/M³
			Climate change	56,786.993	kg CO₂ eq/M³
			Climate change - Biogenic	46.502	kg CO₂ eq/M³
			Climate change - Fossil	56,693.879	kg CO₂ eq/M³
			Climate change - Land use and LU change	46.611	kg CO₂ eq/M³
			Ecotoxicity, freshwater-inorganics	241,971.842	CTUe/M³
			Ecotoxicity, freshwater-organics - p.1	198,801.012	CTUe/M³
			Ecotoxicity, freshwater-organics - p.2	12,346.379	CTUe/M³
			Particulate matter	0.004	disease inc./M³
Groundwater	0.00		Eutrophication, marine	59.746	kg N eq/M³
			Eutrophication, freshwater	19.142	kg N eq/M³
			Eutrophication, terrestrial	614.627	molc N eq/M³
			Human toxicity, cancer	0.001	CTUh/M³
			Human toxicity, cancer-inorganics	0.000	CTUh/M³
			Human toxicity, cancer-organics	0.001	CTUh/M³
			Human toxicity, non-cancer	0.002	CTUh/M³
			Human toxicity, non-cancer-inorganics	0.002	CTUh/M³
			Human toxicity, non-cancer-organics	0.000	CTUh/M³
Rainwater	5,392.00		Ionising radiation	4,773.820	kBq U235 eq/M³
			Land use	140,441.101	Pt/ M³
			Ozone depletion	0.010	kg CFC-11 eq/M³
			Photochemical ozone formation	187.329	kg NMVOC eq/M³
			Resource use, fossils	676,352.053	MJ/M³
			Resource use, minerals and metals	0.252	kg Sb eq/M³
			Water use	1,896,648.704	m³ water eq/M³

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TCC Taipei Plant Taoyuan Branch
No. 220, Sec. 2, Nanshan Rd., Luzhu Dist., Taoyuan City 338020, Taiwan
臺灣水泥股份有限公司台北水泥製品廠桃園分廠
338020 桃園市蘆竹區南山路二段 220 號

Water withdrawal			Impact indicator results		
Resource Type	Quantities	Unit	Impact Category	Quantities	Unit
Tap water	8,549.11	M³/Year	Acidification	56.567	molc H+ eq/M³
			Climate change	10,929.751	kg CO₂ eq/M³
			Climate change - Biogenic	8.950	kg CO₂ eq/M³
			Climate change - Fossil	10,911.830	kg CO₂ eq/M³
			Climate change - Land use and LU change	8.971	kg CO₂ eq/M³
			Ecotoxicity, freshwater-inorganics	46,572.145	CTUe/M³
			Ecotoxicity, freshwater-organics - p.1	38,263.087	CTUe/M³
			Ecotoxicity, freshwater-organics - p.2	2,376.299	CTUe/M³
			Particulate matter	0.001	disease inc./M³
Groundwater	40,648.80		Eutrophication, marine	11.499	kg N eq/M³
			Eutrophication, freshwater	3.684	kg N eq/M³
			Eutrophication, terrestrial	118.297	molc N eq/M³
			Human toxicity, cancer	0.000	CTUh/M³
			Human toxicity, cancer-inorganics	0.000	CTUh/M³
			Human toxicity, cancer-organics	0.000	CTUh/M³
			Human toxicity, non-cancer	0.000	CTUh/M³
			Human toxicity, non-cancer-inorganics	0.000	CTUh/M³
			Human toxicity, non-cancer-organics	0.000	CTUh/M³
Rainwater	1,179.90		Ionising radiation	918.814	kBq U235 eq/M³
			Land use	27,030.597	Pt/ M³
			Ozone depletion	0.002	kg CFC-11 eq/M³
			Photochemical ozone formation	36.055	kg NMVOC eq/M³
			Resource use, fossils	130,176.989	MJ/M³
			Resource use, minerals and metals	0.049	kg Sb eq/M³
			Water use	2,110,912.561	m³ water eq/M³

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Taichung Plant
No. 785, Sec. 3, Zhongqing Rd., Daya Dist., Taichung City 428412, Taiwan
臺灣水泥股份有限公司台中水泥製品廠
428412 台中市大雅區四德里中清路三段 785 號

Water withdrawal			Impact indicator results		
Resource Type	Quantities	Unit	Impact Category	Quantities	Unit
Tap water	1,823.40	M³/Year	Acidification	12.065	molc H+ eq/M³
			Climate change	2,331.157	kg CO₂ eq/M³
			Climate change - Biogenic	1.909	kg CO₂ eq/M³
			Climate change - Fossil	2,327.334	kg CO₂ eq/M³
			Climate change - Land use and LU change	1.913	kg CO₂ eq/M³
			Ecotoxicity, freshwater-inorganics	9,933.160	CTUe/M³
			Ecotoxicity, freshwater-organics - p.1	8,160.959	CTUe/M³
			Ecotoxicity, freshwater-organics - p.2	506.830	CTUe/M³
			Particulate matter	0.000	disease inc./M³
Groundwater	44,563.00		Eutrophication, marine	2.453	kg N eq/M³
			Eutrophication, freshwater	0.786	kg N eq/M³
			Eutrophication, terrestrial	25.231	molc N eq/M³
			Human toxicity, cancer	0.000	CTUh/M³
			Human toxicity, cancer-inorganics	0.000	CTUh/M³
			Human toxicity, cancer-organics	0.000	CTUh/M³
			Human toxicity, non-cancer	0.000	CTUh/M³
			Human toxicity, non-cancer-inorganics	0.000	CTUh/M³
Rainwater	0.00		Human toxicity, non-cancer-organics	0.000	CTUh/M³
			Ionising radiation	195.970	kBq U235 eq/M³
			Land use	5,765.232	Pt/ M³
			Ozone depletion	0.000	kg CFC-11 eq/M³
			Photochemical ozone formation	7.690	kg NMVOC eq/M³
			Resource use, fossils	27,764.854	MJ/M³
			Resource use, minerals and metals	0.010	kg Sb eq/M³
			Water use	1,991,839.969	m³ water eq/M³

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Kaohsiung Plant
No.16, Gongye 1st Rd., Renwu Dist., Kaohsiung City 814036, Taiwan
臺灣水泥股份有限公司高雄水泥製品廠
814036 高雄市仁武區工業一路 16 號

Water withdrawal			Impact indicator results		
Resource Type	Quantities	Unit	Impact Category	Quantities	Unit
Tap water	11,933.43	M³/Year	Acidification	78.960	molc H+ eq/M³
			Climate change	15,256.495	kg CO₂ eq/M³
			Climate change - Biogenic	12.493	kg CO₂ eq/M³
			Climate change - Fossil	15,231.479	kg CO₂ eq/M³
			Climate change - Land use and LU change	12.523	kg CO₂ eq/M³
			Ecotoxicity, freshwater-inorganics	65,008.586	CTUe/M³
			Ecotoxicity, freshwater-organics - p.1	53,410.234	CTUe/M³
			Ecotoxicity, freshwater-organics - p.2	3,317.000	CTUe/M³
			Particulate matter	0.001	disease inc./M³
Groundwater	30,533.00		Eutrophication, marine	16.052	kg N eq/M³
			Eutrophication, freshwater	5.143	kg N eq/M³
			Eutrophication, terrestrial	165.127	molc N eq/M³
			Human toxicity, cancer	0.000	CTUh/M³
			Human toxicity, cancer-inorganics	0.000	CTUh/M³
			Human toxicity, cancer-organics	0.000	CTUh/M³
			Human toxicity, non-cancer	0.000	CTUh/M³
			Human toxicity, non-cancer-inorganics	0.000	CTUh/M³
Rainwater	5,106.00		Human toxicity, non-cancer-organics	0.000	CTUh/M³
			Ionising radiation	1,282.543	kBq U235 eq/M³
			Land use	37,731.156	Pt/ M³
			Ozone depletion	0.003	kg CFC-11 eq/M³
			Photochemical ozone formation	50.328	kg NMVOC eq/M³
			Resource use, fossils	181,709.947	MJ/M³
			Resource use, minerals and metals	0.068	kg Sb eq/M³
			Water use	1,820,949.368	m³ water eq/M³

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Kaohsiung Plant Tainan Branch
No.36, Taiyi 7th St., Rende Dist., Tainan City 717019, Taiwan
臺灣水泥股份有限公司高雄水泥製品廠台南分廠
717019 台南市仁德區一甲里太乙七街 36 號

Water withdrawal			Impact indicator results		
Resource Type	Quantities	Unit	Impact Category	Quantities	Unit
Tap water	5,003.32	M³/Year	Acidification	33.105	molc H+ eq/M³
			Climate change	6,396.581	kg CO₂ eq/M³
			Climate change - Biogenic	5.238	kg CO₂ eq/M³
			Climate change - Fossil	6,386.093	kg CO₂ eq/M³
			Climate change - Land use and LU change	5.250	kg CO₂ eq/M³
			Ecotoxicity, freshwater-inorganics	27,256.111	CTUe/M³
			Ecotoxicity, freshwater-organics - p.1	22,393.277	CTUe/M³
			Ecotoxicity, freshwater-organics - p.2	1,390.717	CTUe/M³
Groundwater	40,798.00		Particulate matter	0.000	disease inc./M³
			Eutrophication, marine	6.730	kg N eq/M³
			Eutrophication, freshwater	2.156	kg N eq/M³
			Eutrophication, terrestrial	69.233	molc N eq/M³
			Human toxicity, cancer	0.000	CTUh/M³
			Human toxicity, cancer-inorganics	0.000	CTUh/M³
			Human toxicity, cancer-organics	0.000	CTUh/M³
			Human toxicity, non-cancer	0.000	CTUh/M³
Rainwater	140.00		Human toxicity, non-cancer-inorganics	0.000	CTUh/M³
			Human toxicity, non-cancer-organics	0.000	CTUh/M³
			Ionising radiation	537.731	kBq U235 eq/M³
			Land use	15,819.519	Pt/ M³
			Ozone depletion	0.001	kg CFC-11 eq/M³
			Photochemical ozone formation	21.101	kg NMVOC eq/M³
			Resource use, fossils	76,185.420	MJ/M³
			Resource use, minerals and metals	0.028	kg Sb eq/M³
		Water use	1,965,915.765	m³ water eq/M³	

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