

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-001651

SITE DETAILS

Site: **Suzhou China Star Optoelectronics Technology Co., Ltd**

Address: No. 338, Fangzhou Road, Suzhou Industrial Park, Suzhou City, Jiangsu Province, 215000, Suzhou, Jiangsu, P.R. CHINA

Contact Person: Lian Lu

AWS Reference Number: AWS-000855

Site Structure: Single Site

CERTIFICATION DETAILS

Certification status: Certified Gold

Date of certification decision: 2025-Aug-27

Validity of certificate: 2028-Aug-26

AUDIT DETAILS

Audited Service(s): AWS Standard v2.0 (2019)

Audit Type(s): Initial Audit

Audit Start Date: 2025-Jun-16

Audit End Date: 2025-Jun-17

Lead Auditor: Lingyun Yu

Audit team participants:

Lorry Long

Ian Jiang

Site Participants:

Wu Bailin, Factory Engineer

Peng Haijun, EHS Engineer

Cui Yunmeng, Factory Engineer

Lu Lian, Factory Engineer

Huang Gang, Area Sustainability Manager

Hu Jiawen, Factory Engineer

Yang Xiaodan, EHS Engineer

Wan Xifeng, EHS Engineer

Wu Zhongming, Factory Engineer

Liu Yuanqiang, Factory Engineer

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-001651

ADDITIONAL INFO

Summary of Audit Findings: During the certification audit, 7 non-conformities and 1 observation were raised.

The Client is requested to perform a root cause analysis and define corrective actions for each of the non-conformities and to submit these to WSAS within 7 days of receipt of the audit report.

The non-conformities must be closed within 90 days of the end of the audit. In order to meet this timeline evidence is to be submitted to WSAS (within 75 days) by 02/09/2025.

The audit team recommends certification of Suzhou China Star Optoelectronics Technology Co., Ltd at Gold level pending approval of the corrective actions plan and closure of the non-conformities.

The non-conformities were successfully closed.

Scope of Assessment: The scope of services covers the Initial certification audit for assessing conformity of Suzhou China Star Optoelectronics Technology Co., Ltd against the AWS International Water Stewardship Standard Version 2.

Suzhou China Star Optoelectronics Technology Co., Ltd. was established in May 2011, is located at No. 338, Fangzhou Road, Suzhou Industrial Park, and mainly engages in the production of liquid crystal display devices. The approved total production capacity is: 140K array substrates/month, 140K color filter substrates/month, and 1142.4K liquid crystal panel screens/year.

The audit was conducted onsite on June 16, 2025 to June 17, 2025. The onsite visit included the assessment of all facilities on the site, including the production building, the wastewater treatment plant, the water purification system, and the canteen.

FINDINGS

NUMBER OF FINDINGS PER LEVEL

Observation	1
Non-Conformity	7

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

FINDING DETAILS

Finding No:	TNR-018820
Checklist Item No:	1.5.1
Status:	Closed
Finding level:	Non-Conformity
Due date:	2025-Sep-15
Checklist item:	Water governance initiatives shall be identified, including catchment plan(s), water-related public policies, major publicly-led initiatives under way, and relevant goals to help inform site of possible opportunities for water stewardship collective action.
Findings:	The site has not yet interpreted the catchment plans, water-related public policies, and major publicly-led initiatives it has identified to identify potential opportunities for the site.
Corrective action:	The site plans to reinterpret all plans and policies at China, Jiangsu Province and Suzhou City levels in the Tai Lake Basin in accordance with the company's internal methods for identifying laws and regulations; The identified potential opportunities are presented in 4.1.2 of the Tai Lake Basin Analysis Report.
Finding No:	TNR-018825
Checklist Item No:	1.5.5
Status:	Closed
Finding level:	Non-Conformity
Due date:	2025-Sep-15
Checklist item:	Important Water-Related Areas shall be identified, and where appropriate, mapped, and their status assessed including any threats to people or the natural environment, using scientific information and through stakeholder engagement.
Findings:	The site has not identified and assessed the status and potential threats to these Important Water-Related Areas (IWRAs) by using scientific information or through stakeholder engagement.
Corrective action:	Conduct a risk assessment of IWRAs by combining publicly available information, research reports, stakeholder surveys, on-site visits, and other methods; The status and potential threats of IWRAs are presented in 4.4.1 of the Tai Lake Basin Analysis Report.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

Finding No:	TNR-018827
Checklist Item No:	1.6.1
Status:	Open
Finding level:	Observation
Checklist item:	Shared water challenges shall be identified and prioritized from the information gathered.
Findings:	It is recommended that the site update/adjust the questionnaire on joint water challenges with stakeholders. The descriptions of the survey questions should be clear and explicit to avoid any misunderstandings. It is also suggested that the site conduct stakeholder surveys in a variety of formats, such as on-site visits to stakeholders, meetings, and workshops.
Finding No:	TNR-018828
Checklist Item No:	1.6.4
Status:	Closed
Finding level:	Non-Conformity
Due date:	2025-Sep-15
Checklist item:	Advanced Indicator Potential water-related social impacts from the site shall be identified, resulting in a social impact assessment with a particular focus on water.
Findings:	The social impact assessment report provided by the site only includes the disclosure of information on stakeholders and the stakeholder satisfaction survey. However, it does not cover the identification of potential water-related social impacts of the site.
Corrective action:	Redesign the social impact assessment framework for the site, add the basic social and cultural situation of Suzhou city, and collect data through historical environmental impact assessments and recent surveys to analyze the potential social impacts related to the site's water
Finding No:	TNR-018588
Checklist Item No:	2.3.5
Status:	Closed
Finding level:	Non-Conformity
Due date:	2025-Aug-18
Checklist item:	Advanced Indicator Stakeholder consensus shall be sought on the site's water stewardship plan. Consensus should be achieved on at least one target. A list of targets that have consensus and in which stakeholders are involved shall be identified.
Findings:	The site did not achieve consensus with stakeholders on the site's water stewardship plan.
Corrective action:	Organize stakeholder meetings or other communication channels at the site (suppliers, government agencies, employees, etc.) to negotiate and maintain consensus records on the water management plan.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

Finding No:	TNR-018589
Checklist Item No:	2.4.2
Status:	Closed
Finding level:	Non-Conformity
Due date:	2025-Aug-18
Checklist item:	Advanced Indicator A plan to mitigate or adapt to water risks associated with climate change projections developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.
Findings:	The site did not identify a plan to mitigate or adapt to water risks associated with climate change projections developed in co-ordination with relevant public-sector and infrastructure agencies.
Corrective action:	Communicate with local public sectors, reach consensus with them on emergency response plans for extreme weather at the site, and keep records.
Finding No:	TNR-018978
Checklist Item No:	3.1.1
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Evidence that the site has supported good catchment governance shall be identified.
Findings:	The evidence provided for the site to support good catchment governance is insufficient. Evidence such as supplementary lists or relevant record of the factory's participation in government water-related meetings/training/activities is not provided.
Corrective action:	Cause analysis: The collection and recording of evidence for external meetings/training/activities at the site are incomplete, resulting in insufficient probative value. Corrective action: Organize all participation records and supplement the missing list of external meetings/training/activities.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-001651

Finding No:	TNR-018973
Checklist Item No:	4.1.1
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated.
Findings:	The performance evaluation of the water stewardship plan is not sufficient, lacking analysis of the implementation results of some specific actions.
Corrective action:	Cause analysis: The performance evaluation framework for sustainable water management at the site is not sound, and some project execution results are missing, resulting in incomplete performance evaluation. Corrective actions: According to the overall framework of the sustainable water management plan, supplement specific project implementation results analysis in the annual sustainable water management report.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

Report Details

Report	Value
Report prepared by	Lingyun Yu
Report approved by	Ruth Wandera
Report approved on (Date)	27 August 2025

Surveillance

Proposed date for next audit
2026-Jun-17

Stakeholder Announcements

Date of publication	Location
15/04/2025	https://a4ws.org/wp-content/uploads/2025/04/AWS-000855_Suzhou-CSO-Technology-Co.-Ltd_StakeholderAnnouncement_April_V3.0-bilingual.pdf
15/04/2025	https://www.tuv.com/content-media-files/greater-china/about-us/downloads/terms-and-conditions-and-certification-regulations/aws-000855_suzhou-china-star-optoelectronics-technology-co.-ltd_stakeholderannouncement_april_v3.0-bilingual.pdf
17/04/2025	https://www.tclcsot.com/development/2838.html

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651



Catchment Information

Catchment Information

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

The Taihu Basin is located in the southern wing of the Yangtze River Delta, bordered by the Yangtze River to the north, the East China Sea to the east, the Qiantang River to the south, and demarcated by the Tianmu and Maoshan Mountains to the west. The basin covers an area of 36,895 square kilometers and is administratively divided among Jiangsu, Zhejiang, Shanghai, and Anhui, comprising three provinces and one municipality. Specifically, Jiangsu accounts for 19,399 square kilometers (52.6%), Zhejiang for 12,095 square kilometers (32.8%), Shanghai for 5,176 square kilometers (14.0%), and Anhui for 225 square kilometers (0.6%).

The topographical features of the Taihu Basin are characterized by higher elevations around the periphery and lower elevations in the center, with the western part higher than the eastern part, forming a saucer-like shape. The western part of the basin consists of mountainous regions, belonging to the Tianmu and Maoshan mountain ranges. The central area features a plain river network and a depression centered around Taihu Lake, along with numerous lakes. The northern, eastern, and southern edges, influenced by sediment deposition from the Yangtze River and Hangzhou Bay, have higher terrain, forming the rim of the saucer. The landforms are divided into mountainous and hilly areas and plains. The western mountainous and hilly region covers an area of 7,338 square kilometers, accounting for about 20% of the basin's total area. The general elevation of the mountainous areas ranges from 200 to 500 meters, while the hilly areas typically range from 12 to 32 meters. The vast central and eastern plain area, spanning 29,557 square kilometers, is divided into the central plain, the highland plain along the river and coast, and the Taihu Lake area. The central plain generally has an elevation below 5 meters, the highland plain along the river and coast has an elevation of 5.0 to 12.0 meters, and the average elevation of the Taihu Lake bed is about 1.0 meter.

The Taihu Basin falls within the subtropical monsoon climate zone, characterized by distinct seasons, abundant rainfall, and ample heat. During winter, the basin is affected by cold continental air masses, with prevailing northerly winds, resulting in a cold and dry climate. In summer, it is controlled by maritime air masses, with prevailing southeast winds, leading to a hot and humid climate. The annual average temperature ranges from 14.9 to 16.2 degrees Celsius, with a temperature distribution pattern of higher temperatures in the south and lower in the north. The annual sunshine duration ranges from 1,870 to 2,225 hours. The average annual precipitation over multiple years (1956–2000) is 1,177 millimeters, with about 60% concentrated in the flood season from May to September. The average annual evaporation over multiple years is 822 millimeters. The average annual natural runoff over multiple years is 16.01 billion cubic meters, equivalent to an annual runoff depth of 438 millimeters. The average annual runoff coefficient over multiple years is 0.37, with variations ranging roughly from 0.21 to 0.55. The average total water resources over multiple years in the basin amount to 17.6 billion cubic meters, of which the surface water resources are 16.01 billion cubic meters, the groundwater resources are 5.31 billion cubic meters, and the overlapping calculation of surface and groundwater is 3.72 billion cubic meters.

The Taihu Basin is the downstream tributary system of the Yangtze River system, featuring a dense network of rivers and a constellation of lakes, with a total water surface area of approximately 5,551 square kilometers, representing a water surface rate of 15%. The water flow is slow, with a velocity of only 0.3 to 0.5 meters per second during the flood season, and the water environment has a low carrying capacity. The lakes in the basin are centered around Taihu Lake, forming the western Taohu Lake group, the southern Jiaxing Lake group, the eastern Dianpu Lake group, and the northern Yangcheng Lake group. Taihu Lake is the largest lake in the basin and serves as an important water source and water resource regulation center. The total length of the rivers in the basin is about 120,000 kilometers, with a river network density of 3.3 kilometers per square kilometer. There are 228 rivers that flow into and out of Taihu Lake. The water system of the basin is centered around Taihu Lake and is divided into the upstream and downstream water systems. The upstream water system mainly consists of independent water systems in the western mountainous and hilly areas, including the Tiaoxi River system, the Nanhe River system, and the Taohu River system. The downstream mainly features the plain river network water system, including the eastern Huangpu River system, the northern Yangtze River water system, and the southeastern Yangtze River Estuary and Hangzhou Bay water system. The Jiangnan Canal (Beijing-Hangzhou Grand Canal) traverses the heart of the basin and the downstream water systems, playing a role in water volume regulation and transfer. The main rivers flowing into

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

the lake include the Tiaoxi River, Nanxi River, and Taohu River, while the rivers flowing out of the lake include the Taipu River, Guajing Port, and Xu River.

The Taihu Basin is situated in the core area of the Yangtze River Delta and is one of the most economically developed regions in China with a dense concentration of large and medium-sized cities, possessing significant geographical and strategic advantages. Within the basin are the metropolis of Shanghai and large and medium-sized cities such as Hangzhou, Suzhou, Wuxi, Changzhou, Zhenjiang, Jiaxing, and Huzhou, as well as numerous rapidly developing small cities and incorporated towns. A well-structured urban system with a complete hierarchy and increasingly rational group structure has been formed, with an urbanization rate reaching 74.7%.

The basin is characterized by a dense population and intensive industries. In 2018, the population of the Taihu Basin was 61.04 million, accounting for 4.4% of the national total population, with a population density of approximately 1,654 people per square kilometer. The total gross domestic product (GDP) of the entire basin was 876.63 billion yuan, representing about 9.7% of the national GDP. The per capita GDP reached 144,000 yuan, which is 2.2 times the national average level.



catchment layout 2.png



Catchment boundary.png

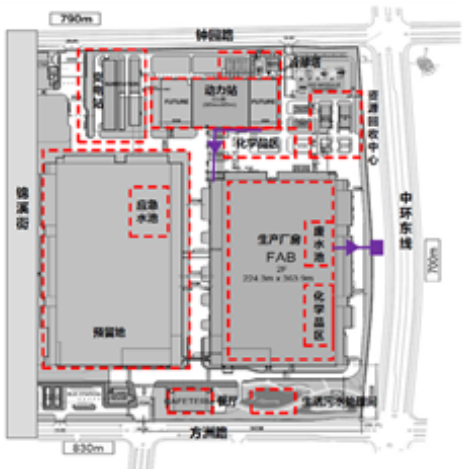
Audit Number: AO-001651

Client Description and Site Details

Client/Site Background

The site, Suzhou China Star Optoelectronics Technology Co., Ltd. was established in May 2011, is located at No. 338, Fangzhou Road, Suzhou Industrial Park, and mainly engages in the production of liquid crystal display devices.

The wastewater generated in the site includes cyanide-containing wastewater, inorganic wastewater, organic wastewater, acid-base wastewater, and domestic sewage. The acid-base wastewater is mainly concentrated water from the UPW system and cooling tower, accounting for 24% of the total wastewater discharge.



layout map of [filename].png

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-001651

Summary of Shared Water Challenges

Summary of Shared Water Challenges

The Catchment Background Report identifies the shared challenges within the catchment, including:

1. The requirements for water pollution prevention and control, water management, and ecological protection are becoming increasingly strict. Level 4
2. There is a risk of deterioration in environmental water quality within the catchment. Level 3
3. The intensification of climate change may lead to frequent extreme weather events. Level 3
4. The operational load of infrastructure within the catchment is relatively high. Level 2
5. There is insufficient compliance with environmental protection laws and regulations, and a lack of transparency in information. Level 2

Meanwhile, based on the analysis of relevance/rationale for stakeholders and relevance/rationale for the site, the site has prioritized the shared challenges. The risk level is from low (Level 1) to high (Level 4). The level of risk is determined by attention, impact, and outcome.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

1 STEP 1: GATHER AND UNDERSTAND

1.1 *Gather information to define the site's physical scope for water stewardship purposes, including: its operational boundaries; the water sources from which the site draws; the locations to which the site returns its discharges; and the catchment(s) that the site affect(s) and upon which it is reliant.*

1.1.1 *The physical scope of the site shall be mapped, considering the regulatory landscape and zone of stakeholder interests, including:*

- Site boundaries;
- Water-related infrastructure, including piping network, owned or managed by the site or its parent organization;
- Any water sources providing water to the site that are owned or managed by the site or its parent organization;
- Water service provider (if applicable) and its ultimate water source;
- Discharge points and waste water service provider (if applicable) and ultimate receiving water body or bodies;
- Catchment(s) that the site affect(s) and is reliant upon for water.



Comment The site draws a site boundary map, which identifies the site boundary information and the layout within the site. The site also collects information on the destination of its wastewater discharge, the location of the final receiving water body, the location of water service providers, and their water sources.
The site has developed a site and catchment background report. In this report, it contains the following content:

- Map of site boundaries with the source of water supply and discharge points of wastewater and rainwater.
- Map of water-related infrastructures at the site such as pipeline, and wastewater treatment plant.
- Map of the water plant (Qingyuan Huayan Xingang Street Water Plant) and its ultimate water source (Yangcheng Lake Water Intake Point), municipal WWTP (Qingyuan Huayan First Sewage Treatment Plant) and its ultimate receiving water body (Wusong River).
- Map of the catchment that the site affects and is reliant upon for water.

1.2 *Understand relevant stakeholders, their water related challenges, and the site's ability to influence beyond its boundaries.*

1.2.1 *Stakeholders and their water-related challenges shall be identified. The process used for stakeholder identification shall be identified. This process shall:*

- Inclusively cover all relevant stakeholder groups including vulnerable, women, minority, and Indigenous people;
- Consider the physical scope identified, including stakeholders, representative of the site's ultimate water source and ultimate receiving water body or bodies;
- Provide evidence of stakeholder consultation on water-related interests and challenges;
- Note that the ability and/or willingness of stakeholders to participate may vary across the relevant stakeholder groups;
- Identify the degree of stakeholder engagement based on their level of interest and influence.



CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

Comment	The site has developed an analysis table of stakeholders and has established diversified communication channels with different stakeholders, such as phone calls, e-mails, meetings, questionnaires, visits, etc. The site identifies and confirms the perspectives of different types of stakeholders on water-related interests and challenges through stakeholder questionnaires. Based on the summary and analysis of the stakeholder questionnaires, the site identified the degree of stakeholder engagement according to their level of interest and influence.	
1.2.2	<i>Current and potential degree of influence between site and stakeholder shall be identified, within the catchment and considering the site's ultimate water source and ultimate receiving water body for wastewater.</i>	 Yes
Comment	The site has developed an analysis table of stakeholders, and the degree of influence between the site and stakeholders has been identified for each stakeholder.	
1.3	<i>Gather water-related data for the site, including: water balance; water quality, Important Water-Related Areas, water governance, WASH; water-related costs, revenues, and shared value creation.</i>	
1.3.1	<i>Existing water-related incident response plans shall be identified.</i>	 Yes
Comment	The site has developed a series of water-related incident response plans that include multiple scenarios. Such as: 1. Comprehensive emergency plan for sudden environmental incidents, which identifies the response process for emergency situations related to environmental pollution, including topics such as wastewater, chemicals, hazardous waste, air emissions, etc. The plan was registered with Suzhou Industrial Park Ecological Environment Bureau, 320509-2022-464-M; 2. Emergency plan for natural disasters, identifying response processes for natural disasters such as floods, rainstorm, and typhoons; 3. Emergency response process for chemical spills; 4. Emergency plan related to water supply; 5. Emergency Plan for Water Pollution Incidents, including failures of wastewater treatment facilities, water pollution accidents caused by fires/explosions, and water pollution incidents resulting from chemical spills. (Emergency response plan related to wastewater) 6. Emergency plan related to food poisoning and major infectious disease events. The site prepares an emergency drill plan every year, which includes all the drills planned for the year (including water-related emergency drills). The drill topics, participants, drill time, and other details are defined.	
1.3.2	<i>Site water balance, including inflows, losses, storage, and outflows shall be identified and mapped</i>	 Yes
Comment	• The site has installed a digital water meter system to measure water consumption in real-time in various key departments (such as pure water stations, cooling water towers, canteen, and workshops), and analyze water consumption and trends on a monthly basis. • The site tracks the readings of each water meter every day and carries out a water balance analysis daily. • The site has recorded the income and input and output data via meter or estimation and developed a water balance map based on the data. The water balance map reflected the water inflows, losses, reuses, and outflows. • In July 2023, the site commissioned a third-party organization to conduct water balance testing, complied with the "General Principles of Water Balance Test in Enterprises (GB/T12452-2008)", a China national standard, which identifies water inflow, losses, storage and drainage, including production water, domestic water, reuse water, reuse water, etc.	
1.3.3	<i>Site water balance, inflows, losses, storage, and outflows, including indication of annual variance in water usage rates, shall be quantified. Where there is a water-related challenge that would be a threat to good water balance for people or environment, an indication of annual high and low variances shall be quantified.</i>	 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

Comment The site installed various of intelligence sensor to collect the water volume data in real time, and summary the data at monthly basis. Therefore, the annual variance could be identified as well.

In July 2023, the site commissioned a third-party organization to conduct water balance testing, complied with the "General Principles of Water Balance Test in Enterprises (GB/T12452-2008)", a China national standard, which identifies water inflow, losses, storage and drainage, including production water, domestic water, reuse water, reuse water, etc.

1.3.4 *Water quality of the site's water source(s), provided waters, effluent and receiving water bodies shall be quantified. Where there is a water-related challenge that would be a threat to good water quality status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be quantified.*



Yes

Comment The site has developed a water quality monitoring inventory, which includes monitoring requirements for sewage, incoming water, drinking water, recycled water, and pure water for production, including monitoring points, monitoring methods, pollutant names, monitoring frequency, and control standards. For example:

- Industrial wastewater:

The site generates three types of wastewater, namely: acid and alkali wastewater (generated from the pure water system and the circulating water system), inorganic wastewater, and organic wastewater. All the wastewater generated by the site is discharged to "Suzhou China Star Environmental Protection Technology Co., Ltd." for pre-treatment. (which belongs to the same parent company as the site) After pre-treatment, the wastewater is discharged to the municipal wastewater treatment plant for further treatment and eventual discharge.

- The acid and alkali wastewater is discharged after pH adjustment. The site commissions a third-party laboratory to test the discharged wastewater on a monthly basis.

- The inorganic and organic wastewater needs to go through the complete wastewater treatment system of Suzhou China Star Environmental Protection Technology Co., Ltd., including physical, chemical, and biological treatment processes, before being discharged. Suzhou China Star Environmental Protection Technology Co., Ltd. is responsible for monitoring the discharged wastewater.

- Domestic wastewater:

- Domestic wastewater is tested by an external qualified laboratory once a year

- Rainwater:

- The site has installed an online monitoring device at all the rainwater outlets to measure PH and CI in real-time

- The site entrusts a third-party laboratory to test the water quality of rainwater outlets once a year.

- Drinking water

- The site provides employees with free drinking water, equipped with 20 water dispensers, and entrusts a third-party laboratory once a year to test the quality of drinking water, in accordance with the standard: Drinking Water Quality Standard, DB32/T761-2022

Environmental water quality

- There are a total of 4 groundwater and 19 soil monitoring points in the site area, which are monitored once a year

- By communicating with the local community, the site actively assists in the water quality monitoring and treatment of the main river within the community's jurisdiction: the No. 26 River in the industrial park. The site entrusts a third-party laboratory to test the river's water quality annually. The parameters tested include: pH, COD, NH3-N, TN, TP, Pb, Cd, and oils.

1.3.5 *Potential sources of pollution shall be identified and if applicable, mapped, including chemicals used or stored on site.*



Yes

Comment The site has identified potential sources of pollution such as chemical storage and usage, wastewater tanks, and storage of hazardous waste, and relevant measures to prevent and control contamination have been taken including strengthening management, establishment of secondary containment, and emergency response. In addition, the site has mapped the identified potential sources of pollution.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

1.3.6	<i>On-site Important Water-Related Areas shall be identified and mapped, including a description of their status including Indigenous cultural values.</i>	 Yes
Comment	As per the site tour, document review, and interview, no IWRA is within the site.	
1.3.7	<i>Annual water-related costs, revenues, and a description or quantification of the social, cultural, environmental, or economic water-related value generated by the site shall be identified and used to inform the evaluation of the plan in 4.1.2.</i>	 Yes
Comment	The water-related costs sheet was provided for review, including: 1. Water supply costs 2. Cost of wastewater discharge rights 3. Cost of Water Treatment (including electricity of pumps, consumables, depreciation and maintenance of facilities, etc.) 4. Cost of Wastewater Treatment 4. Water/wastewater/rainwater quality testing, peripheral water testing. Operation and maintenance of waste online testing facilities 5. Environmental training, frugal project investment, stakeholders' collaboration 6. AWS related expenses The site identified water-related cost data from 2022 to 2024 and analyzed the trends. The water-related revenues included: Income from frugal projects and the social, cultural, environmental, and economic water-related value generated by the site.	
1.3.8	<i>Levels of access and adequacy of WASH at the site shall be identified.</i>	 Yes
Comment	• As per the Evaluation Report on the Effectiveness of Occupational Disease Hazard Control (November 2024), the WASH facilities in the site area, such as the restaurant, workshops, etc., comply with the requirements of the Hygiene Standards for Industrial Enterprises (GBZ 1-2010). • The site installs water purification facilities in workshops and office areas, providing drinking water to employees. The water purification facilities were regularly maintained. • The site provides employees with free drinking water, equipped with 20 water dispensers, and entrusts a third-party laboratory once a year to test the quality of drinking water, in accordance with the standard: Drinking Water Quality Standard, DB32/T761-2022 • The site also provides sufficient toilets to workers, and regular cleaning is conducted. Necessary equipment like handwash and tissue were also provided. • The site performed the assessment of the WASH level as per WBCSD. The result is satisfactory.	
1.4	<i>Gather data on the site's indirect water use, including: its primary inputs; the water use embedded in the production of those primary inputs the status of the waters at the origin of the inputs (where they can be identified); and water used in out-sourced water-related services.</i>	
1.4.1	<i>The embedded water use of primary inputs, including quantity, quality and level of water risk within the site's catchment, shall be identified.</i>	 Yes
Comment	The site screened and identified the suppliers/service providers whose procurement costs account for more than 5% (11 suppliers/service providers were included), and then sent the questionnaires to investigate their indirect water consumption (A total of 11 suppliers/service providers provided feedback). Through the investigation, the site collected water consumption information from suppliers. Moreover, the site also evaluates the risk of indirect water based on the supplier's water usage, water source, wastewater quality, environmental violation records, WRI water risk screening results, etc.	
1.4.2	<i>The embedded water use of outsourced services shall be identified, and where those services originate within the site's catchment, quantified.</i>	 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

Comment The site also collects the water consumption of its outsourced services such as hazardous waste disposal units, cleanroom suit cleaning service providers, and wastewater treatment plants through questionnaires.

1.4.3 *Advanced Indicator*
The embedded water use of primary inputs in catchment(s) of origin shall be quantified.  **Yes**

Comment The site screened and identified the suppliers/service providers whose procurement costs account for more than 5%(11 suppliers/service providers were included), and through the investigation questionnaires. The site analyzed the water-related risk level of suppliers by the intensity of water consumption, dependent water sources, water management, environmental violation records, and WRI water risk screening results.
Via the data of suppliers' total water consumption, production volume, and production volume proportion, the site could calculate the embedded water use of the main suppliers.
The total annual water consumption of the 11 suppliers/service providers is approximately 3.48 million tons.

1.5 *Gather water-related data for the catchment, including water governance, water balance, water quality, Important Water-Related Areas, infrastructure, and WASH*

1.5.1 *Water governance initiatives shall be identified, including catchment plan(s), water-related public policies, major publicly-led initiatives under way, and relevant goals to help inform site of possible opportunities for water stewardship collective action.*  **No**

Comment Water governance initiatives were identified in the Catchment Background Survey Report by the site. The initiatives included national, provincial, and local levels, including the catchment development plan, industrial development plan, environmental and ecological conservation plan, etc.

Finding No: TNR-018820

1.5.2 *Applicable water-related legal and regulatory requirements shall be identified, including legally-defined and/or stakeholder-verified customary water rights.*  **Yes**

Comment Applicable water-related legal and regulatory requirements were collected and listed. The site checks and updates the list annually.

1.5.3 *The catchment water-balance, and where applicable, scarcity, shall be quantified, including indication of annual, and where appropriate, seasonal, variance.*  **Yes**

Audit Number: AO-001651

Comment

The Catchment Background Survey Report provides a detailed analysis of the water balance for Taihu catchment and Suzhou City. The water balance in the catchment is analyzed based on the rainfall (mm), precipitation (m3), surface water resources (m3), groundwater resources(m3), water diversion (m3), displacement(m3), storage(m3), consumption(m3), total water supply (m3) and total water consumption(m3). All the data is collected from government websites and published reports.

According to the Suzhou Water Resources Bulletin (2023), the total water resources in Suzhou in 2023 were 5.2968 billion cubic meters, an increase of 317.63 million cubic meters compared to the previous year, and an increase of 223.67 million cubic meters compared to the long-term average. Among them, the surface water resources are 4.9149 billion cubic meters, and the groundwater resources are 984.8 million cubic meters.

In 2023, the total water consumption in the city was 10.015 billion cubic meters, including 1.106 billion cubic meters for agricultural water consumption, 7.352 billion cubic meters for industrial water consumption, 1.163 billion cubic meters for domestic water consumption, and 0.394 billion cubic meters for ecological environment water consumption. From 2015 to 2023, the water consumption in Suzhou remained stable.

According to the "Comprehensive Plan for Water Resources in Suzhou City (2021-2035)", the surface water resource consumption rate in Suzhou City was 28.70% in 2020, and the average surface water resource consumption rate in the past five years was 33.28%. The surface water development and utilization rate in Suzhou City was 29.44% in 2020, and the average surface water resource development and utilization rate in the past five years was 38.26%. In 2020, the groundwater intake in Suzhou City was about 0.03 million cubic meters, and the average groundwater resource development and utilization rate in the past five years was 0.62%. (Data source: Suzhou City Comprehensive Plan for Water Resources (2021-2035))

According to the "Suzhou Water Resources Bulletin (2023)," from 2015 to 2023, the water resources in Suzhou City have shown significant variations between abundant and scarce years. The year 2016 had the highest precipitation, while 2015, 2020, and 2023 had relatively high precipitation levels, all classified as abundant water years. The years 2018 and 2021 had higher-than-average precipitation, categorized as moderately abundant years. The years 2017 and 2019 had precipitation levels close to the long-term average, classified as normal water years. The year 2022 had relatively low precipitation, classified as a moderately dry year.

According to the "Taihu Basin Water Resources Bulletin (2023)," in 2023, the precipitation in the provinces and cities within the Taihu Basin was higher than the national average.

However, the per capita water resources in these areas were lower than the national per capita level, with Suzhou City's per capita water resources being significantly lower than the national average. Additionally, as can be seen from the chart, the per capita water resources in Suzhou City, Shanghai, and Jiaxing City are below the internationally recognized threshold for severe water scarcity (500 cubic meters). Therefore, the three regions of Suzhou City in Jiangsu Province, Shanghai, and Jiaxing City in Zhejiang Province, which are covered by the Taihu Basin, face local water resource shortages and need to rely on water sources passing through their areas, such as the Yangtze River and Taihu Lake.

1.5.4

Water quality, including physical, chemical, and biological status, of the catchment shall be identified, and where possible, quantified. Where there is a water-related challenge that would be a threat to good water quality status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be identified.



Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

Comment	The Catchment Background Survey Report provides a detailed analysis of water quality for the catchment. The site obtained the relate information from the government website. (Mainly from the Environmental and Ecological Bureau). The data includes the water quality of the water source, the final discharged water body, the water from municipal water plant. The data will be published monthly or annually, therefore, the annual variances could be identified. According to the annual environmental status bulletin released by the Suzhou Municipal Government and the regular water quality status reports of the Taihu Basin issued by the Taihu Basin Administration of the Ministry of Water Resources, the annual or seasonal variation trends of water quality in the basin have been identified. For example, based on the "2024 Annual Environmental Status Bulletin of Suzhou City," among the 30 sections included in the surface water environmental quality assessment in Suzhou City, the proportion of sections with annual average water quality reaching or exceeding the Class III standard of the "Surface Water Environmental Quality Standard (GB3838-2002)" is 93.3%, which is basically the same as in previous years; the proportion of sections with annual average water quality reaching the Class II standard is 63.3%, an increase of 10 percentage points compared to the previous year.	
1.5.5	<i>Important Water-Related Areas shall be identified, and where appropriate, mapped, and their status assessed including any threats to people or the natural environment, using scientific information and through stakeholder engagement.</i>	 No
Comment	The Catchment Background Survey Report lists the Important Water-Related Areas of the catchment. The Important Water-Related Areas are collected from government-published documents, including 'Ecological protection red line of Jiangsu Province', and 'Ecological environment zoning of three lines and one list'.	
		Finding No: TNR-018825
1.5.6	<i>Existing and planned water-related infrastructure shall be identified, including condition and potential exposure to extreme events.</i>	 Yes
Comment	The Catchment Background Survey Report lists the existing and planned water-related infrastructure including water supply, flood control, and drainage, wastewater treatment, emergency response at provincial, catchment, and city levels, and water-related objectives. Based on the available information, the water-related infrastructure in the catchment is relatively good.	
1.5.7	<i>The adequacy of available WASH services within the catchment shall be identified.</i>	 Yes
Comment	The site obtained the WASH status in Suzhou from the Suzhou Statistical Yearbook for 2021-2023, including data on environmental sanitation, tap water penetration rate, wastewater treatment rate, and other relevant metrics. The site also identified the WASH status at the catchment level through the Urban Statistical Yearbook published by the Ministry of Housing and Urban-Rural Development of China. Overall, the WASH services within the catchment area are in good condition.	
1.5.8	<i>Advanced Indicator</i> <i>Efforts by the site to support and undertake catchment level water-related data collection shall be identified.</i>	 Yes
Comment	Through communication with the local community, the site actively assists in the water quality monitoring and management of the main river within the community's jurisdiction: the No. 26 River in the Industrial Park. The site entrusts a third-party laboratory to conduct annual water quality tests of the river. The parameters tested include: pH, COD, NH3-N, TN, TP, Pb, Cd, and oils. The site shares the test results with the local community.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

1.5.9	<i>Advanced Indicator</i> <i>The adequacy of WASH provision within the catchments of origin of primary inputs shall be identified.</i>	 Yes
Comment	The site has identified the adequacy of WASH provision within the catchments of origin of primary inputs including the coverage of safe drinking water supply, the coverage of wastewater treatment, and the rate of security disposal of municipal solid waste.	
1.6	<i>Understand current and future shared water challenges in the catchment, by linking the water challenges identified by stakeholders with the site's water challenges.</i>	
1.6.1	<i>Shared water challenges shall be identified and prioritized from the information gathered.</i>	 Obs.
Comment	The site conducted questionnaire surveys with stakeholders to solicit their opinions on the shared water challenge and summarized the attention of various stakeholders to water-related topics in the catchment. The Catchment Background Report identifies the shared challenges within the catchment, including: 1. The requirements for water pollution prevention and control, water management, and ecological protection are becoming increasingly strict. Level 4 2. There is a risk of deterioration in environmental water quality within the catchment. Level 3 3. The intensification of climate change may lead to frequent extreme weather events. Level 3 4. The operational load of infrastructure within the catchment is relatively high. Level 2 5. There is insufficient compliance with environmental protection laws and regulations and a lack of transparency in information. Level 2 Meanwhile, based on the analysis of relevance/rationale for stakeholders and relevance/rationale for the site, the site has prioritized the shared challenges. The risk level is from low (Level 1) to high (Level 4). The level of risk is determined by attention, impact, and outcome.	
1.6.2	<i>Initiatives to address shared water challenges shall be identified.</i>	 Yes
Comment	In response to the aforementioned shared water challenges, the site has identified measures to address them, including public initiatives and the site's action plan.	
1.6.3	<i>Advanced Indicator</i> <i>Future water issues shall be identified, including anticipated impacts and trends</i>	 Yes
Comment	The site analyzed the trends in population changes, agricultural, industrial, and domestic water use changes, climate, and ecological environment changes within the catchment by querying reports published by government or academic institutions. And based on research reports and WWF, WRI water risk analysis models, predictions were made for future water issues in the basin. Overall, by 2030, Climate change is intensifying, which may lead to frequent extreme weather events and water quality risks in drinking water sources and some areas.	
1.6.4	<i>Advanced Indicator</i> <i>Potential water-related social impacts from the site shall be identified, resulting in a social impact assessment with a particular focus on water.</i>	 No
Comment	The social impact assessment report provided by the site only includes the disclosure of information on stakeholders and the stakeholder satisfaction survey. However, it does not cover the identification of potential water-related social impacts of the site.	

Finding No: TNR-018828

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

1.7	<i>Understand the site's water risks and opportunities: Assess and prioritize the water risks and opportunities affecting the site based upon the status of the site, existing risk management plans and/or the issues and future risk trends identified in 1.6.</i>	
1.7.1	<i>Water risks faced by the site shall be identified, and prioritized, including likelihood and severity of impact within a given timeframe, potential costs and business impact.</i>	 Yes
Comment	The site identified its water risks and summarized them in a spreadsheet. They categorized the water risk into physical risk, regulatory risk, and reputation risk. The spreadsheet that lists the water risks faced by the site. The site scored the frequency of the risk and severity of the impact, and then multiplied the two scores to evaluate the level of the risk. The potential costs, business impact, and control measures are also included in the spreadsheet.	
1.7.2	<i>Water-related opportunities shall be identified, including how the site may participate, assessment and prioritization of potential savings, and business opportunities.</i>	 Yes
Comment	The site has identified six major business opportunities considering how the site may participate. The potential value includes cost saving, image enhancement, sustainability of enterprise operation, and customer trust, and ranked their importance.	
1.8	<i>Understand best practice towards achieving AWS outcomes: Determining sectoral best practices having a local/catchment, regional, or national relevance.</i>	
1.8.1	<i>Relevant catchment best practice for water governance shall be identified.</i>	 Yes
Comment	The site has identified relevant catchment best practices for water governance including: • Collaborate with peer organizations and stakeholders to promote sustainable water management; • A comprehensive water stewardship plan that is routinely reviewed and updated; • Training of employees on the principles of water stewardship; • Engaging with peer organizations and stakeholders to promote water stewardship; • Communicating on its own water stewardship to set a leading example to others; • Continue to implement a sustainable management system, obtain ISO 14001 and AWS certification, and maintain the effectiveness of the system. • Conduct water risk assessments for the factory using WRI tools and publish the results in the sustainability report. • Implement SBTi management and introduce actions to reduce carbon emissions and mitigate climate risks. • Monitor wastewater discharge on a daily basis and ensure a year-on-year reduction in wastewater discharge through budget control. • Use the site in the Taihu catchment as a case study to promote AWS certification for factories in other catchments, such as Wuhan, Shenzhen, Guangzhou, and Huizhou.	
1.8.2	<i>Relevant sector and/or catchment best practice for water balance (either through water efficiency or less total water use) shall be identified.</i>	 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

Comment	The site has identified relevant sector and/or catchment best practices for water balance including: • Carry out water balance test according to national recommended standard GB/T 12452. • Reuse rate of production water in the entire factory, $\geq 95\%$ • Install water-efficient fittings, for example for toilets, washrooms, equipment washing facilities, bath installations, etc. • Establish a water management system by using the digital water meter network to monitor the water consumption and trends of various departments and production lines in real-time. • In accordance with Smart Water Management ISO 24591, a comprehensive smart water monitoring network has been established, covering the entire process from water intake, water use to water discharge. This network enables real-time monitoring and analysis of data such as water volume, conductivity, TOC (Total Organic Carbon), and pH. • Refer to the first-level (most stringent) standard for water consumption in the cleaner production standard for the electronic component manufacturing industry, the water consumption per unit product is less than 0.81m³ per square meter. • Annual evaluation of the current best available technologies in the industry • The water consumption per unit product has reached the advanced level of the industry water quota within the basin as published by the official authorities.	
1.8.3	<i>Relevant sector and/or catchment best practice for water quality shall be identified, including rationale for data source.</i>	 Yes
Comment	The site has identified relevant sector and/or catchment best practice for water quality, such as: • Refer to the first-level (most stringent) standard for water consumption in the cleaner production standard for the electronic component manufacturing industry, the wastewater discharge is less than 1.6 m³ per square meter of product, the COD is less than 100 mg/L, the ammonia nitrogen is less than 10 mg/L, the total phosphorus is less than 8 mg/L, and the hazardous waste production is less than 15 kilograms per square meter of product. • Evaluate the current best available technologies to reduce pollutant emissions; • Formulate internal control standards stricter than discharge permit for industrial wastewater	
1.8.4	<i>Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified.</i>	 Yes
Comment	The site has identified best practices related to Important Water Related Areas (IWRA). Such as: • Conduct health and biodiversity surveys on IWRA • Carry out collective action to advocate for the restoration or protection of IWRA	
1.8.5	<i>Relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services shall be identified.</i>	 Yes
Comment	The site has identified relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services including: • In accordance with WBCSD guidelines, regularly clean the water supply system. • Enhance the accessibility of office handwashing facilities by adding restrooms for people with disabilities and nursing rooms to facilitate the use of vulnerable groups. • Post drinking water test reports at drinking water facilities for easy viewing by employees. • Provide shower rooms to allow production line employees to clean themselves. • Install real-time monitoring in the cafeteria and broadcast it on dining screens, with on-site feedback suggestion boxes.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

2	STEP 2: COMMIT & PLAN - Commit to be a responsible water steward and develop a Water Stewardship Plan	
2.1	<i>Commit to water stewardship by having the senior-most manager in charge of water at the site, or if necessary, a suitable individual within the organization head office, sign and publicly disclose a commitment to water stewardship, the implementation of the AWS Standard and achieving its five outcomes, and the allocation of required resources.</i>	
2.1.1	<i>A signed and publicly disclosed site statement OR organizational document shall be identified. The statement or document shall include the following commitments:</i> - That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes - That the site implementation will be aligned to and in support of existing catchment sustainability plans - That the site's stakeholders will be engaged in an open and transparent way - That the site will allocate resources to implement the Standard.	 Yes
Comment	A water stewardship commitment to follow all the AWS core criteria has been signed by the top manager of China Star Suzhou Site. The commitment includes all the necessary element and has been displayed on TCLCSOT' Website.	
2.1.2	<i>Advanced Indicator</i> <i>A statement that explicitly covers all requirements set out in Indicator 2.1.1 and is signed by the organization's senior-most executive or governance body and publicly disclosed shall be identified.</i>	 Yes
Comment	A water stewardship commitment to follow all the AWS core criteria has been signed by the top manager of China Star Suzhou Site. The commitment includes all the necessary element and has been displayed on TCLCSOT' Website. https://www.tclcsot.com/uploads/soft/20250612/1-250612145H9644.pdf	
2.2	<i>Develop and document a process to achieve and maintain legal and regulatory compliance.</i>	
2.2.1	<i>The system to maintain compliance obligations for water and wastewater management shall be identified, including:</i> - Identification of responsible persons/positions within facility organizational structure - Process for submissions to regulatory agencies.	 Yes
Comment	The site disclosed information of its water management organizational structure and members of the compliance responsible team on its website. The site has prepared its CSOT environmental pollution control management system (PR-PAM-000226), which defines the water management responsibilities of each department, the clear process exists who and when submits which types of required reports on water. The site has also established Compliance Assessment Management Standard (WI-PAM-000665) to ensure the operation of the site meets the provisions of relevant laws, regulations and other requirements.	
2.3	<i>Create a water stewardship strategy and plan including addressing risks (to and from the site), shared catchment water challenges, and opportunities.</i>	
2.3.1	<i>A water stewardship strategy shall be identified that defines the overarching mission, vision, and goals of the organization towards good water stewardship in line with this AWS Standard.</i>	 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

Comment	The site has developed a water stewardship strategy and announced it on its official website. The strategy expounds the site's long-term plan for water stewardship in terms of standardized management, corporate social responsibility and implementation of best practices, including: 1. Set up a base-level water management committee, directly led by the base general manager. Regularly review water management objectives annually. Establish and periodically maintain a sustainable water management system. 2. Minimize the impact of water use through process water saving, recycling, and regeneration measures. 3. Implement wastewater reduction improvements and continuously monitor water quality, ensure the quality of the discharged wastewater is superior to national/local discharge standards. 4. Support ecological restoration and environmental protection education in important water areas of the catchment. 5. Ensure the safety of employees' drinking water.	
2.3.2	<i>A water stewardship plan shall be identified, including for each target:</i> - How it will be measured and monitored - Actions to achieve and maintain (or exceed) it - Planned timeframes to achieve it - Financial budgets allocated for actions - Positions of persons responsible for actions and achieving targets - Where available, note the link between each target and the achievement of best practice to help address shared water challenges and the AWS outcomes.	 Yes
Comment	The site has developed a Water Stewardship Plan (Year 2024 and Year 2025), which specifies targets, required actions, measurement, status, effectiveness evaluation, accountable and deadline, etc. The Water Stewardship Plan is associated with five main outcomes of AWS, including good water governance, sustainable water balance, good water quality status, IWRA and WASH, such as: • Establish a job responsibility system for water conservation, clarify the responsibilities of each position and preside over water conservation work. • Improve the indirect water use performance of the site by survey the water risk of suppliers • Through continuous process improvement, water use per unit products in 2024 was less than 0.52 tons/m². • The quality of the discharged wastewater meets 100% of the internal control requirements of the site, and the wastewater internal control index of the site is lower than the wastewater discharge permit requirements. • Conduct drinking water facility maintenance every month and conducted drinking water testing every quarter to ensure the safety of drinking water. • Organized river patrol activity with at least twice per year.	
2.3.3	<i>Advanced Indicator</i> <i>The site's partnership/water stewardship activities with other sites within the same catchment (which may or may not be under the same organisational ownership) shall be identified and described.</i>	 Yes
Comment	1. On April 23-24, 2025, the site attended the AWS management training with one brother company (M10) within the same catchment and shared AWS experience with each other. On June 10, 2025, the two companies also signed the jointly promote AWS Mutual Assistance Agreement. 2. On June 11, 2025, the site combined local community office organized 'river patrol' activity in the Park No.26 river. 3. On May 24, 2024, the site conducted water source activity for Children's Day, introduced the company water use condition, pure water manufacturing method and wastewater treatment method to children, and also conducted a lively question-and-answer session on water source. 4. On May 15, 2025, the site shared its water saving experience in water conservation management training which was conducted by the Industrial Park.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

2.3.4	<i>Advanced Indicator</i> <i>The site's partnership/water stewardship activities with other sites in another catchment(s) (either under same corporate structure or with another corporate site) shall be identified.</i>	 Yes
Comment	On May 27, 2025, the site organized a sharing seminar on sustainable water stewardship to share its experience in carrying out AWS with brother company (Shenzhen site) in another catchment and promoted them to conduct water protection activity. On June 12, 2025, the Group company organized Supplier Meetings, and the site shared the AWS management standards to their suppliers (including suppliers in same catchment and in another catchment).	
2.3.5	<i>Advanced Indicator</i> <i>Stakeholder consensus shall be sought on the site's water stewardship plan. Consensus should be achieved on at least one target. A list of targets that have consensus and in which stakeholders are involved shall be identified.</i>	 No
Comment	The site communicates its sustainable Water Stewardship Plan with various stakeholders through questionnaires, but did not achieve consensus with stakeholders on the site's water stewardship plan.	
Finding No: TNR-018588		
2.4	<i>Demonstrate the site's responsiveness and resilience to respond to water risks</i>	
2.4.1	<i>A plan to mitigate or adapt to identified water risks developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.</i>	 Yes
Comment	The site has established Emergency Environmental Emergency plan, it states the emergency environmental emergency process and business continuity strategy, the content covers chemical leakage, wastewater, solid waste, emergency shutdown, water shutdown, power outage, storm weather emergency environment, etc. The emergency plan had been registered in Suzhou Industrial Park Ecological and Environmental Bureau. The site has identified its water risks, and corresponding strategies to mitigate water risks are developed. The site developed these via study of the government's water-related plan or consultation with the government. TCL China Star (the group company of the site) also compiled TCL China Star Climate Information Disclosure Report which included the climate change projections of Suzhou City.	
2.4.2	<i>Advanced Indicator</i> <i>A plan to mitigate or adapt to water risks associated with climate change projections developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.</i>	 No
Comment	TCL China Star (the group company of the site) also compiled TCL China Star Climate Information Disclosure Report which included the climate change projections of Suzhou City. However, the site did not identify a plan to mitigate or adapt to water risks associated with climate change projections developed in co-ordination with relevant public-sector and infrastructure agencies.	
Finding No: TNR-018589		

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

3 STEP 3: IMPLEMENT - Implement the site's stewardship plan and improve impacts	
3.1	Implement plan to participate positively in catchment governance.
3.1.1	Evidence that the site has supported good catchment governance shall be identified. ✗ No
Comment	The site will participate the water-related seminar or training hosted by government, and join the initiative organized by government. The site has provided the related participation records for review. Finding No: TNR-018978
3.1.2	Measures identified to respect the water rights of others including Indigenous peoples, that are not part of 3.2 shall be implemented. ✓ Yes
Comment	The water rights are respected under legal and regulatory mechanisms, and there is no indigenous people in the catchment area.
3.2	Implement system to comply with water-related legal and regulatory requirements and respect water rights.
3.2.1	A process to verify full legal and regulatory compliance shall be implemented. ✓ Yes
Comment	The site has established the "CSOT Compliance Evaluation Management Specification" WI-PAM-000665. The site has identified the applicable laws and regulations, and performance the compliance check. The site provided the latest identification and evaluation form of CSOT EHS/ Energy laws, regulations and other requirements for review.
3.2.2	Where water rights are part of legal and regulatory requirements, measures identified to respect the water rights of others including Indigenous peoples, shall be implemented. ✓ Yes
Comment	Water rights are not part of legal and regulatory requirements. The site will comply with water-related legal and regulatory requirements and respect water rights.
3.3	Implement plan to achieve site water balance targets.
3.3.1	Status of progress towards meeting water balance targets set in the water stewardship plan shall be identified. ✓ Yes
Comment	The site has developed a Water Stewardship Plan (Year 2024 and 2025) , which specifies targets, required actions, measurement, status, effectiveness evaluation, accountable and deadline, etc. The actions for improving water balance including 1.Add one RO facility, to collect the concentrated water from the first-stage RO which was previously directly discharged to the sewage treatment station. Now, it is collected and sent to the RO equipment for treatment and then being reused. 2.The drainage from the cooling tower was previously directly discharged, but now it is collected and sent to the RO equipment for recycling.
3.3.2	Where water scarcity is a shared water challenge, annual targets to improve the site's water use efficiency, or if practical and applicable, reduce volumetric total use shall be implemented. ✓ Yes
Comment	The site set water use efficiency in the water stewardship strategy. The target is reducing 15% water intensity in 2030 compared to 2023.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

3.3.3	<i>Legally-binding documentation, if applicable, for the re-allocation of water to social, cultural or environmental needs shall be identified.</i>	 Yes
Comment	Legally-binding documentation for the re-allocation of water to social, cultural or environmental needs is not applicable in the catchment.	
3.3.4	<i>Voluntary Advanced Indicator The total volume of water voluntarily re-allocated (from site water savings) for social, cultural and environmental needs shall be quantified.</i>	 N/A
Comment	The site does not perform this indicator.	
3.4	<i>Implement plan to achieve site water quality targets</i>	
3.4.1	<i>Status of progress towards meeting water quality targets set in the water stewardship plan shall be identified.</i>	 Yes
Comment	A series of water stewardship plans are implemented to achieve the site's water quality targets. Including: 1. Replace the chemicals used in production, to reduce the fluorine concentration in wastewater 2. Extend the scenario to adopt the recycle water to reduce the wastewater volume.	
3.4.2	<i>Where water quality is a shared water challenge, continual improvement to achieve best practice for the site's effluent shall be identified and where applicable, quantified.</i>	 Yes
Comment	The site set a more stringent internal discharge standard, which is 50% of the discharge limit.	
3.5	<i>Implement plan to maintain or improve the site's and/or catchment's Important Water-Related Areas.</i>	
3.5.1	<i>Practices set in the water stewardship plan to maintain and/or enhance the site's Important Water-Related Areas shall be implemented.</i>	 Yes
Comment	On June 11th, 2025, the site jointly organized a beach cleaning activity with Jinghua Community. 12 people participated. On May 24th, 2025, an environmental promotion activity was organized by the site. A total of 150 families participated in the event. During the event, the site explain the conditions of the surrounding rivers to enhance understanding.	
3.5.2	<i>Advanced Indicator Evidence of completed restoration of non-functioning or severely degraded Important Water-Related Areas including where appropriate cultural values from a site-selected baseline date shall be identified. Restored areas may be outside of the site, but within the catchment.</i>	 N/A
Comment	The site does not perform this indicator.	
3.5.3	<i>Advanced Indicator Evidence from a representative range of stakeholders showing consensus that the site is seen as positively contributing to the healthy status of Important Water-Related Areas in the catchment shall be identified.</i>	 N/A
Comment	The site does not perform this indicator.	
3.6	<i>Implement plan to provide access to safe drinking water, effective sanitation, and protective hygiene (WASH) for all workers at all premises under the site's control.</i>	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

3.6.1	<i>Evidence of the site's provision of adequate access to safe drinking water, effective sanitation, and protective hygiene (WASH) for all workers onsite shall be identified and where applicable, quantified.</i>	 Yes
Comment	1. The WASH installations fully comply with the national "Hygienic Standards for the Design of Industrial Enterprises" (GBZ 1-2010). 2. The site conducts WBCSD self-assessment to evaluate the level of onsite WASH and the final result was 95%. 3. The site carried out a questionnaire survey on employee satisfaction regarding drinking water, sanitation, and facilities. 4. The site conducts regular testing of drinking water and secondary water supply to ensure safe drinking water, and the report show the result is compliance. 5. Sanitation and hygiene installations are checked and cleaned daily, water purifiers are checked daily and maintained when needed	
3.6.2	<i>Evidence that the site is not impinging on the human right to safe water and sanitation of communities through their operations, and that traditional access rights for indigenous and local communities are being respected, and that remedial actions are in place where this is not the case, and that these are effective.</i>	 Yes
Comment	No evidence is showed that the site is impinging on the human right to safe water and sanitation of communities through their operations according to the interviews with the site's employees, local community and local government authorities.	
3.6.3	<i>Advanced Indicator A list of actions taken to support the provision to stakeholders in the catchment of access to safe drinking water, adequate sanitation and hygiene awareness shall be identified.</i>	 N/A
Comment	The site does not perform this indicator.	
3.6.4	<i>Voluntary Advanced Indicator: In catchments where WASH has been identified as a shared water challenge, evidence of efforts taken with relevant public-sector agencies to share information and to advocate for change to address access to safe drinking water and sanitation shall be identified.</i>	 N/A
Comment	The site does not perform this indicator.	
3.7	<i>Implement plan to maintain or improve indirect water use within the catchment:</i>	
3.7.1	<i>Evidence that indirect water use targets set in the water stewardship plan, as applicable, have been met shall be quantified.</i>	 Yes
Comment	Indirect water uses targets not applicable in the water stewardship plan. The site plans to perform the water risk investigation of 10 key suppliers during 2025.	
3.7.2	<i>Evidence of engagement with suppliers and service providers, as well as, when applicable, actions they have taken in the catchment as a result of the site's engagement related to indirect water use, shall be identified.</i>	 Yes
Comment	The site has organized a supplier seminar, and most of the suppliers have joined the seminar. During the seminar, the site provided AWS training to their supplier.	
3.7.3	<i>Advanced Indicator Actions taken to address water related risks and challenges related to indirect water use outside the catchment shall be documented and evaluated.</i>	 N/A
Comment	The site does not perform this indicator.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

3.8	<i>Implement plan to engage with and notify the owners of any shared water-related infrastructure of any concerns the site may have.</i>	
3.8.1	<i>Evidence of engagement, and the key messages relayed with confirmation of receipt, shall be identified.</i>	Yes
Comment	The site keeps close contact with local water-related infrastructure owners through many ways such as Wechat or phone call. For example, the site will regularly submit the water consumption plans to the water bureau of the industrial park The site also regular inspects the external sewage treatment plants (Huaxing Environment), and takes samples for testing.	
3.9	<i>Implement actions to achieve best practice towards AWS outcomes: continually improve towards achieving sectoral best practice having a local/catchment, regional, or national relevance.</i>	
3.9.1	<i>Actions towards achieving best practice, related to water governance, as applicable, shall be implemented.</i>	Yes
Comment	The site performed following action to achieve the best practice: Established the Water resources management policy, improving procedure such as water conservation systems, defined the water conservation management position and responsibility. Adopt the intelligent energy/water management platform to monitor water usage in real time and optimized the process.	
3.9.2	<i>Actions towards achieving best practice, related to targets in terms of water balance shall be implemented.</i>	Yes
Comment	The site has developed a Water Stewardship Plan (Year 2024 and 2025) , which specifies targets, required actions, measurement, status, effectiveness evaluation, accountable and deadline, etc. The actions for improving water balance including 1.Add one RO facility, to collect the concentrated water from the first-stage RO which was previously directly discharged to the sewage treatment station. Now, it is collected and sent to the RO equipment for treatment and then being reused. 2.The drainage from the cooling tower was previously directly discharged, but now it is collected and sent to the RO equipment for recycling.	
3.9.3	<i>Actions towards achieving best practice, related to targets in terms of water quality shall be implemented.</i>	Yes
Comment	A series of water stewardship plans are implemented to achieve the site's water quality targets. Including: 1.Replace the chemicals used in production, to reduce the fluorine concentration in wastewater 2. Extend the scenario to adopt the recycle water to reduce the wastewater volume. 3.Set the emission target as 50% of the regulatory standard	
3.9.4	<i>Actions towards achieving best practice, related to targets in terms of the site's maintenance of Important Water-Related Areas shall be implemented.</i>	Yes
Comment	A series of water stewardship plans are implemented to achieve the maintenance of IWRAs. On June 11th, 2025, the site jointly organized a beach cleaning activity with Jinghua Community. 12 people participated. On May 24th, 2025, an environmental promotion activity was organized by the site. A total of 150 families participated in the event. During the event, the site explain the conditions of the surrounding rivers to enhance understanding.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

3.9.5	<i>Actions towards achieving best practice related to targets in terms of WASH shall be implemented.</i>	 Yes
Comment	A series of water stewardship plans are implemented the WASH. Disabled toilets are provided on each floor, and mother-and-baby rooms are set up on the second floor to facilitate the use of vulnerable groups Three more direct drinking water machines will be added to replace bottled water	
3.9.6	<i>Voluntary Advanced Indicator Achievement of identified best practice related to targets in terms of good water governance shall be quantified.</i>	 N/A
Comment	The site does not perform this indicator.	
3.9.7	<i>Voluntary Advanced Indicator Achievement of identified best practice related to targets in terms of sustainable water balance shall be quantified.</i>	 N/A
Comment	The site does not perform this indicator.	
3.9.8	<i>Voluntary Advanced Indicator Achievement of identified best practices related to targets in terms of water quality shall be quantified</i>	 N/A
Comment	The site does not perform this indicator.	
3.9.9	<i>Voluntary Advanced Indicator Achievement of identified best practices related to targets in terms of the site's maintenance of Important Water-Related Areas have been implemented.</i>	 N/A
Comment	The site does not perform this indicator.	
3.9.10	<i>Voluntary Advanced Indicator Achievement of identified best practice related to targets in terms of WASH shall be quantified.</i>	 N/A
Comment	The site does not perform this indicator.	
3.9.11	<i>Voluntary Advanced Indicator A list of efforts to spread best practices shall be identified.</i>	 N/A
Comment	The site does not perform this indicator.	
3.9.12	<i>Voluntary Advanced Indicator A list of collective action efforts, including the organizations involved, positions of responsible persons of other entities involved, and a description of the role played by the site shall be identified.</i>	 N/A
Comment	The site does not perform this indicator.	
3.9.13	<i>Voluntary Advanced Indicator Evidence of the quantified improvement that has resulted from the collective action relative to a site-selected baseline date shall be identified and evidence from an appropriate range of stakeholders linked to the collective action (including both those implementing the action and those affected by the action) that the site is materially and positively contributing to the achievement of the collective action shall be identified.</i>	 N/A
Comment	The site does not perform this indicator.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

4 STEP 4: EVALUATE - Evaluate the site's performance.		
4.1	<i>Evaluate the site's performance in light of its actions and targets from its water stewardship plan and demonstrate its contribution to achieving water stewardship outcomes.</i>	
4.1.1	<i>Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated.</i>	 No
Comment	The site performed annual water stewardship management review. The review covered the requirements of evaluating site performance and its contribution to achieving water stewardship results based on the objectives of the water stewardship plan. The 2024 water stewardship plan has 16 actions. Each action has defined good practices, cost/benefit, desired outcomes, responsible party, start date, end date, status and actual performance. Finding No: TNR-018973	
4.1.2	<i>Value creation resulting from the water stewardship plan shall be evaluated.</i>	 Yes
Comment	The review covered the value creation resulting from the water stewardship plan. For 2024, the site has reduced water consumption over 7000 tons, and reduce 2.5% of the wastewater volume.	
4.1.3	<i>The shared value benefits in the catchment shall be identified and where applicable, quantified.</i>	 Yes
Comment	The site analyzed its value creation resulting from the implementation of water stewardship plan. For example, the water-related promotion activities strength the awareness of 400 people. The site reduces 2.5% of the wastewater volume via extend the scenario to adopt the recycle water.	
4.1.4	<i>Advanced Indicator A governance or executive-level review, including discussion of shared water challenges, water risks, and opportunities, and any water-related cost savings or benefits realized, and any relevant incidents shall be identified.</i>	 N/A
Comment	The site does not perform this indicator.	
4.2	<i>Evaluate the impacts of water-related emergency incidents (including extreme events), if any occurred, and determine the effectiveness of corrective and preventative measures.</i>	
4.2.1	<i>A written annual review and (where appropriate) root-cause analysis of the year's emergency incident(s) shall be prepared and the site's response to the incident(s) shall be evaluated and proposed preventative and corrective actions and mitigations against future incidents shall be identified.</i>	 Yes
Comment	No water-related emergencies and extreme events occurred at the site in recent years. The site presents its emergency response procedure and plan identifying proposed preventive and corrective actions, as well as measures to mitigate future incidents. The site also provide the drilling record covered the water-related topics including water suspend, malfunction of the WWTP, spill, heavy rain and ect.	
4.3	<i>Evaluate stakeholders' consultation feedback regarding the site's water stewardship performance, including the effectiveness of the site's engagement process.</i>	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

4.3.1	<i>Consultation efforts with stakeholders on the site's water stewardship performance shall be identified.</i>	 Yes
Comment	The site communicates its sustainable water stewardship performance with various stakeholders through multiple way, such as questionnaires, interviews, visit, including local ecological environment bureaus, industrial park management committee, surrounding enterprises and supplier etc.	
4.3.2	<i>Voluntary Advanced Indicator The site's efforts to address shared water challenges shall be evaluated by stakeholders. This shall include stakeholder reviewing of the site's efforts across all five outcome areas, and their suggestions for continual improvement.</i>	 N/A
Comment	The site does not perform this indicator.	
4.4	<i>Evaluate and update the site's water stewardship plan, incorporating the information obtained from the evaluation process in the context of continual improvement.</i>	
4.4.1	<i>The site's water stewardship plan shall be modified and adapted to incorporate any relevant information and lessons learned from the evaluations in this step and these changes shall be identified.</i>	 Yes
Comment	The site has developed a procedure which specifies that its water stewardship plan shall be modified and adapted to incorporate any relevant information and lessons learned from the evaluations annual. The site provided the 2025 water stewardship plan, and the improvement has been made.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

5	STEP 5: COMMUNICATE & DISCLOSE - Communicate about water stewardship and disclose the site's stewardship efforts	
5.1	Disclose water-related internal governance of the site's management, including the positions of those accountable for legal compliance with water-related local laws and regulations.	
5.1.1	The site's water-related internal governance, including positions of those accountable for compliance with water-related laws and regulations shall be disclosed.	✓ Yes
Comment	The site disclosed the site's internal governance in relation to water, and communication on sustainable water management issues on TCL CSOT's Website.	
5.2	Communicate the water stewardship plan with relevant stakeholders.	
5.2.1	The water stewardship plan, including how the water stewardship plan contributes to AWS Standard outcomes, shall be communicated to relevant stakeholders.	✓ Yes
Comment	The site has communicated its water stewardship plan with stakeholders through questionnaires and disclosed on TCL CSOT's Website.	
5.3	Disclose annual site water stewardship summary, including: the relevant information about the site's annual water stewardship performance and results against the site's targets.	
5.3.1	A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a minimum.	✓ Yes
Comment	The site disclosed the water stewardship performance of 2024, including quantified performance against targets on TCL CSOT's Website.	
5.3.2	Advanced Indicator The site's efforts to implement the AWS Standard shall be disclosed in the organization's annual report.	✓ Yes
Comment	Water stewardship performance summary is available on TCL CSOT's website. Also the ESG report will disclose the water stewardship performance.	
5.3.3	Voluntary Advanced Indicator Benefits to the site and stakeholders from implementation of the AWS Standard shall be quantified in the organization's annual report.	✓ Yes
Comment	Water stewardship performance summary is available on TCL CSOT's website. Also the ESG report will disclose the water stewardship performance.	
5.4	Disclose efforts to collectively address shared water challenges, including: associated efforts to address the challenges; engagement with stakeholders; and co-ordination with public-sector agencies.	
5.4.1	The site's shared water-related challenges and efforts made to address these challenges shall be disclosed.	✓ Yes
Comment	The site disclosed the shared water-related challenges and the effort to address shared water challenges on TCL CSOT's website. https://www.tclcsot.com/uploads/soft/20250619/1-250619152PBS.pdf	
5.4.2	Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified.	✓ Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001651

Comment	The site advocates stakeholder participation through multiple channels, which mainly include: 1. Conducting stakeholder surveys to collect water-related topics of concern to stakeholders and disclosing the site's water management plans and performance. 2. Collaborating with neighboring enterprises to share water management experiences, engage in collective actions, and establish mutual assistance mechanisms. 3. Organizing suppliers seminars to communicate the AWS standard.	
5.5	<i>Communicate transparency in water-related compliance: make any site water-related compliance violations available upon request as well as any corrective actions the site has taken to prevent future occurrences.</i>	
5.5.1	<i>Any site water-related compliance violations and associated corrections shall be disclosed.</i>	 Yes
Comment	A procedure to manage non-conformance and related corrective action is developed, there is no water-related compliance violation identified in past few years.	
5.5.2	<i>Necessary corrective actions taken by the site to prevent future occurrences shall be disclosed if applicable.</i>	 Yes
Comment	A procedure to manage non-conformance and related corrective action is developed, there is no water-related compliance violation identified in past few years.	
5.5.3	<i>Any site water-related violation that may pose significant risk and threat to human or ecosystem health shall be immediately communicated to relevant public agencies and disclosed.</i>	 Yes
Comment	A procedure to manage non-conformance and related corrective action is developed, there is no water-related compliance violation identified in past few years.	

Previous Findings

All non-conformities raised in the previous audit have been satisfactorily closed.


N/A