

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

SITE DETAILS

Site: **PT Hanjaya Mandala Sampoerna, Tbk. Sukorejo Plant**

Address: Jalan Raya Surabaya - Malang KM 51.4, 67161, Sukorejo - Kab. Pasuruan, INDONESIA

Contact Person: Amanda Hadi IsTianti

AWS Reference Number: AWS-000116

Site Structure: Single Site

CERTIFICATION DETAILS

Certification status: Certified Core

Date of certification decision: 2025-Oct-17

Validity of certificate: 2028-Oct-16

AUDIT DETAILS

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

Audit Type(s): Re-Certification Audit

Audit Start Date: 2025-Sep-02

Audit End Date: 2025-Sep-04

Lead Auditor: Hasudungan Sahat

Audit team participants:

Hasudungan Sahat, Lead Auditor

Site Participants:

Septian Handoko, Sustainability Engineering

Nuansa Prameswari, EHS

Fitri Ayu Lestari, EHS

I Made Mahendra Wijaya, Head East Manufacturing

Indra Pece, IFMS

Ardha Setiawan, IFMS

Gazza Prenmash Barkah, Sustainability

Paulus Dwi Darmawan, Sustainability

Bernice Lenora, Sustainability Manager

AUDIT TIMES

Dates	Audit from	Duration	Auditor	Description
2025-Sep-02	08:00:00 - 17:00:00	09:00	Hasudungan Sahat	
2025-Sep-03	08:00:00 - 16:30:00	08:30	Hasudungan Sahat	
2025-Sep-04	08:00:00 - 16:00:00	08:00	Hasudungan Sahat	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647



ADDITIONAL INFO

Summary of Audit Findings: During the re-certification audit, 1 observations were raised.

The audit team recommends re-certification of PT Hanjaya Mandala Sampoerna Tbk. – Sukorejo Plant at Core level.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Scope of Assessment: The scope of services covers the recertification audit for assessing the conformity of PT Hanjaya Mandala Sampoerna Tbk. – Sukorejo Plant against the AWS International Water Stewardship Standard Version 2.

PT HM Sampoerna Plant Sukorejo is a tobacco manufacturer that primarily produces a variety of tobacco products for machine-made cigarettes. It also supplies raw materials for hand-rolled cigarettes to other PT HM Sampoerna affiliates in Indonesia. As of August 2025, the plant employs a total of 3,097 people.

The facility spans a total site area of 1,428,957 m², with a built-up area of 629,197.04 m² (44%) and a green area of 799,759.96 m² (56%). The site includes manufacturing buildings, administrative facilities, and essential infrastructure for cigarette packaging operations, wastewater treatment, and employee services.

The plant comprises several production buildings dedicated to various sectors, including the hand-rolled clove cigarette industry, white cigarette industry, machine-rolled clove cigarette industry, and other cigarette products. It also features warehouses, a wastewater treatment plant, a canteen area, a clinic, a maintenance building, fire stations, a biomass building, a printing building, and an office.

The PT HM Sampoerna Sukorejo Plant is located within the Kedunglarang sub-watershed, which is a part of the Gumandar watershed. The Kedunglarangan Watershed is one of 257 watersheds in the working area of the Sampean Watershed - Office Management. It is located at the westernmost edge of the Sampean Watershed jurisdiction. The northwest boundary of the Kedunglarangan Watershed borders the Porong Sub-watershed, part of the Brantas Watershed. The southeastern boundary is adjacent to the Welang Watershed, and its downstream area is located in Pasuruan City. The upstream of the Kedunglarangan Watershed is in the peak of Mount Arjuno, part of the R Suryo Conservation Forest, while the downstream is located in the Madura Strait. The Kedunglarangan Watershed is divided into five sub-watersheds based on its river flow: the Upstream Kedunglarangan Sub-watershed, Lower Kedunglarangan Sub-watershed, Gumandar Sub-watershed, Masangan Sub-watershed, and Raci Sub-watershed.

The groundwater system of the Kedunglarangan Watershed is a component of the Pasuruan Groundwater Basin, with recharge and discharge areas situated on the slopes of Mount Arjuno-Welirang. The watershed consists of several types of aquifers with different productivity. Productive aquifers with area distribution cover 44.75% of the total watershed area, while medium productive aquifers with area distribution cover 32.13%. Small productive aquifers cover 10.20%, and areas with scarce groundwater represent 12.92% of the watershed.

The site relies on groundwater as its primary water source, which is extracted through four deep wells. It operates two systems for managing wastewater. For wastewater that contains oil or has a Chemical Oxygen Demand (COD) level exceeding the established limit, the site collaborates with a third-party wastewater provider, PT PIER, for proper treatment. Conversely, wastewater that meets the necessary standards is directed to the wastewater treatment plant (WWTP) before being safely discharged into the ultimate water bodies.

The audit was conducted onsite on 2-4 September 2025.

The onsite visit involved assessing various elements, including the site's water infrastructure, main process areas, the wastewater treatment plant (WWTP), visiting Ngadimulyo village to see the implementation of the WASH program, visiting ultimate water bodies, wastewater discharge points, as well as chemical and fuel storage areas and activities that were examined during the audit.

The following external stakeholders were interviewed during the audit: Forum Komunikasi Pasuruan Sehat (Community), Regional Development Planning, Research and Development Agency (Government), PT Tanobel (a neighboring industry), and a representative of Ngadimulyo village.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

FINDINGS

Observation 1

FINDING DETAILS

Finding No:	TNR-020486
Checklist Item No:	1.5.4
Status:	Open
Finding level:	Observation
Checklist item:	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.
Findings:	While Kedunglarangan serves as the primary groundwater source for the site, the surface water quality in the Kedunglarangan watershed—both upstream and downstream—does not represent the quality of the groundwater in the broader quality catchment area. No information is available beyond the outside plant to represent the broader groundwater quality monitoring at the catchment level.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-001647

Report Details

Report	Value
Report prepared by	Hasudungan Sahat
Report approved by	Ozge Gokmen
Report approved on (Date)	16/10/2025

Surveillance

Proposed date for next audit
2026-Aug-31

Stakeholder Announcements

Date of publication	Location
17/07/2025	Jawa Pos News Paper
17/06/2025	AWS Website
17/06/2025	WSAS Website
Comment	The audit time has changed from September 3-5, 2025, to September 2-4, 2025, because September 5, 2025, is a national holiday. Based on consultation from the site's legal team, it is not advisable to republish the notice in the local mass media because it will cause information dispute, as the change of day does not skip weeks or months.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647



Catchment Information

Catchment Information

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Catchment Name

The PT HM Sampoerna Sukorejo Plant is located within the Kedunglarang sub-watershed, which is a part of the Gumandar watershed. The Kedunglarangan Watershed is one of 257 watersheds in the working area of the Sampean Watershed - Office Management. It is located at the westernmost edge of the Sampean Watershed jurisdiction. The northwest boundary of the Kedunglarangan Watershed borders the Porong Sub-watershed, part of the Brantas Watershed. The southeastern boundary is adjacent to the Welang Watershed, and its downstream area is located in Pasuruan City. The upstream of Kedunglarangan Watershed is in the peak of Mount Arjuno part of the R Suryo Conservation Forest, while downstream is located in the Madura Strait. The Kedunglarangan Watershed is divided into five sub-watersheds based on its river flow: the Upstream Kedunglarangan Sub-watershed, Lower Kedunglarangan Sub-watershed, Gumandar Sub-watershed, Masangan, Sub-watershed, and Raci Sub-watershed

Water Supply & Discharge Catchment

The site depends on the Kedunglarangan sub-watershed for its water supply, specifically utilizing groundwater. The treated wastewater from the PT. HM Sampoerna Plant Sukorejo is discharged into the Curah Banyak River. From there, it flows to the nearest river channel and merges with the Gumandar River, eventually leading to the Betiting River. The water then combines with flows from the upstream Kedunglarangan Watershed, including the Kedawung River and Getih River to the north, as well as the Masangan River and Raci River to the east. Finally, the water flows toward the Lower Kedunglarangan River before reaching the sea.

Groundwater Aquifers

The groundwater system of the Kedunglarangan Watershed is a component of the Pasuruan Groundwater Basin, with recharge and discharge areas situated on the slopes of Mount Arjuno-Welirang. The watershed consists of several types of aquifers with different productivity. Productive aquifers with area distribution cover 44.75% of the total watershed area, while medium productive aquifers with area distribution cover 32.13%. Small productive aquifers cover 10.20%, and areas with scarce groundwater represent 12.92% of the watershed.

The aquifer layer contains both unconfined and confined aquifers. The unconfined aquifers are located closer to the surface, while the confined aquifers are found deeper underground. These confined aquifers are situated above non-permeable volcanic rocks, which create artesian conditions; this means that the groundwater is under pressure. Pressurized zones are primarily found in areas with lower slopes and foothills, a result of the steep volcanic terrain. The depth of unconfined aquifers varies, with groundwater levels typically at or near the surface. Water discharge rates from these aquifers range from 5 liters to more than 10 liters per second, depending on the specific location.

Primarily, groundwater recharge takes place in the upstream regions on the slopes of Mount Arjuno-Welirang, where the annual rainfall averages 2,939 mm. The upstream recharge zones have limited groundwater availability because water infiltrates downward through volcanic deposits and fractures. The recharged water then flows through permeable volcanic rocks and sediments, moving from the higher elevation recharge areas toward the lower discharge areas near the coast. The steep sides of the mountains provide hydraulic pressure that pushes groundwater through the multi-layered aquifer system toward the Madura Strait.

Catchment Water Service Providers

PT. HM Sampoerna Plant Sukorejo does not utilize external water service providers and instead relies on direct groundwater extraction through a deep well system. The facility operates its own internal water treatment system that purifies the groundwater before consumption. For wastewater management, the plant operates a Wastewater Treatment Plant (WWTP) and third parties (PT PIER) for treated raw wastewater that has a COD concentration more than the standard per sum pit (100,000/sumpit, or 150,000/sumpit or

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

200,000/sumpit) or contains oil. The treated effluent is discharged into the curah banyak river. Rainwater and stormwater are channeled through the plant's internal drainage system, which connects to the municipal drainage network.

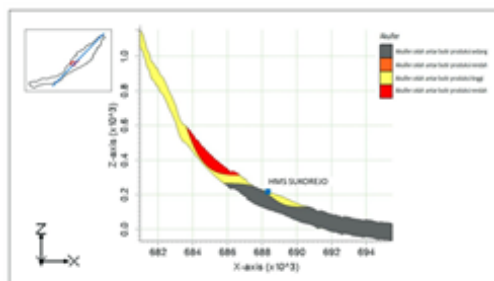
Catchment Features

Based on research analysis, the Kedunglarangan watershed where the site operates, is categorized as high productive aquifer. No water shortage or flooding problem at the watershed location on the hills. The Kedunglarangan watershed is a tropical climate zone, and the drainage basin characteristics include a mix of residential settlements, agriculture, and industrial areas. The upper part of the Kedunglarangan Watershed includes the Raden Soeryo People's Forest Park (Tahura R Suryo), which serves as a conservation and production forest area.



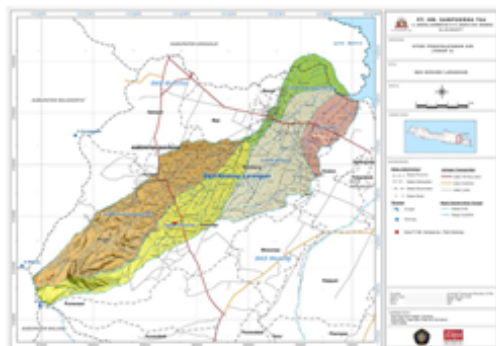
Gambar 2. 27 peta hidrogeologi
Figure 2. 27 hydrogeological map

Hydrogeology Map.jpg



Gambar 3. 49 penampang melintang lapisan aqifer di bawah subDAS gambut
Figure 3. 49 cross-sectional profile of the aquifer layer beneath the gambut sub-watershed

Aquifer of Site.jpg



Gambar 2. 2 peta DAS Kedunglarangan beserta subDASnya
Figure 2. 2 map of kedunglarangan watershed and its sub-watersheds

Kedunglarangan Watershed.png

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Client Description and Site Details



site map.jpg

Client/Site Background

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Site Location

The PT. HM Sampoerna Plant Sukorejo is located at Jalan Raya Surabaya - Malang KM 51.4. 67161 Sukorejo - Kab. Pasuruan, Indonesia . GPS Site Coordinate: -7.6817950000; 112.7065000000

Briefly Describe Surroundings

The site is situated within a industrial and residential areas. This positioning places the facility in a mixed-use environment that combines residential housing with local commercial activities typical of Indonesian urban settlements.

The Site Production

PT HM Sampoerna Plant Sukorejo is a tobacco manufacturer, mainly producing a variety of tobacco products for machine cigarettes and a supplier of raw material for hand-rolled cigarettes for PT HM Sampoerna affiliates in Indonesia. The site uses the water in the production area (Primary Processing, Secondary Processing, Sampoerna Printing Processing (SPP), and Pilot Plant) for domestic use. Water is also needed in several machines, such as Boiler Gas, Boiler Biomass, Cooling Tower, and Chiller.

The Water-Related Infrastructure

PT HM Sampoerna Plant Sukorejo maintains several water-related infrastructure systems on site:

1. Water sources: Deep well system for groundwater extraction
2. Water treatment facilities: For process domestic and production wastewater
3. Water use for production: Primary Processing, Secondary Processing, Sampoerna Printing Processing (SPP) and Pilot Plant.
4. Water use in energy facilities: For operate boilers or cooling towers
5. Wastewater treatment facilities.
6. Cooling towers.
7. Rainwater harvesting infrastructure: Not exist
8. Stormwater management infrastructure: Storm drainage system integrated with the municipal network
9. Fire water: The water from groundwater also used for fire water sytems and flushing on fire truck on-site.
10. Other infrastructure: Infiltration wells and biopore systems for water management

The Wastewater and Stormwater Discharged

Wastewater, whether from industrial or domestic sources, is temporarily collected in sump pits, which are then pumped out by wastewater trucks. Subsequently, the collected wastewater in tanker trucks is transported to the WWTP (Wastewater Treatment Plant) and STP (Sewage Treatment Plant) area. Industrial wastewater is transported and poured into equalization tanks for wastewater and grease traps for the STP.

PT HM Sampoerna Tbk Sukorejo Plant uses a sump pit as a temporary container for the wastewater produced, before being vacuumed using a tank truck. The use of this sump pit is one form of initiative taken by the Sukorejo Plant to overcome the problem of the wide range that must be passed when sending wastewater using pipes, and to avoid leakage along the wastewater channel to the WWTP. The discharge point wastewater will be channeled to an outfall point in a river (Curah Banyak River).

Since the beginning of 2025, due to the production of new products that generate wastewater with high COD levels and oil discharge. The site outsources third parties (PT PIER) for treated raw wastewater that has a COD concentration more than the standard per each sum pit (100,000/sum pit, or 150,000/sum pit, or 200,000/sum pit) or contains oil.

Based on the WWTP design, the site WWTP unit can treat wastewater with COD levels

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

between 100,000 - 200,000 mg/L, depending on each sum-pit capacity to accommodate COD levels and the presence or absence of oil content in the wastewater. As the site WWTP can not handle the wastewater that contains oil.

Rainwater and stormwater are channeled through the plant's internal drainage system, which connects to the municipal drainage network for ultimate discharge.

A Short Description of the Site

The PT HM Sampoerna Plant Sukorejo employs a total of 3097 people as of August 2025. The facility covers a total site area of 1.428.957 m² premises area with 629.197,04 m² (44%) built-up area and 799.759,96 m² (56%) as a green area. The site consists of manufacturing buildings, administrative facilities, and supporting infrastructure necessary for cigarette packing operations, wastewater treatment, and employee services.



site location.jpg



river mapping of kedunglarangan.png

Summary of Shared Water Challenges

Summary of Shared Water Challenges

The site has identified shared water challenges based on various sources of data, including the “Water Risk Filter”, stakeholder feedback from the community, NGOs such as STAPA and Cempaka, SETC, and the local government. The data also includes a baseline study, a water risk filter, and a drought and flood risk map from the National Disaster Management Authority. Using all of this information, the site has listed the shared water challenges and prioritized them accordingly. The list of shared water challenges includes water depletion, surface water quality, landslides, drought, floods, flash floods, forest fires, volcanic eruptions, and access to sanitation.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

0.0.1 Water Source & Discharge Locations		
0.01	Have any water source or discharge locations been visited during the audit, if so, which and where? If none were visited, please provide justification.	Yes
Comment	Yes. The auditor is visiting the five deep wells as the source water inside the site location and the discharge location in the Curah Banyak River.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

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.


Yes

Comment The site has identified and documented its boundaries, water recharge areas, discharge points from the company, and discharge points of effluent treated by third parties. The company also has a water source map for detailed water withdrawal with geographic data in KML format. The site water source is entirely from groundwater, which is extracted through five deep wells. Four deep wells are used for production (deep wells 1, 2, 4, and 5), and one deep well for the government monitoring (deep well 3). Based on the bor-log, the aquifer types of all the deep wells are in the tuff sand layer.

The wastewater from the site has two discharge points. One is treated on site and sent to the curah banyak river. The other discharge involves untreated wastewater with COD and oil levels that exceed the maximum capacity of the WWTP, which is then transported by tank truck to an external water treatment plant (PT PIER) for treatment and disposal. This third-party treatment has been carried out since the beginning of 2025, due to the production of new products that generate wastewater with high COD levels and oil discharge. Based on the WWTP design, the company's WWTP unit can treat wastewater with COD levels between 100,000 - 200,000 mg/L, depending on each sum-pit capacity to accommodate COD levels and the presence or absence of oil content in the wastewater.

The site is located in the area of the Kedunglarang sub-watershed, which is a part of the Gumandar watershed.

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.


Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment	The site has identified 116 stakeholders within its catchment areas and physical scope, including : - 4 national authorities, - 1 regional authority, - 10 local authorities, - 1 academic institution, - 6 NGOs, - 10 local community groups, - 4 healthcare facilities, - 18 service provider companies, - 59 industrial entities from nine sectors. - 3 Internal stakeholders from employee The primary water-related stakeholders include a district environmental agency, a water resources agency, a drinking water company, a watershed management agency, and a wastewater treatment provider. To engage vulnerable communities, the site focused on women's participation through programs like waste sorting and sanitation education, particularly in Ngadimulyo Village. There are no indigenous peoples in the area. A Stakeholder Power, Interest, and Engagement Matrix was developed, categorizing stakeholders into four engagement approaches. Key Players, requiring close management, include 15 stakeholders such as environmental agencies, government agencies, service providers, and internal employees. Six stakeholders need satisfaction through collective engagement, including a community group and various service providers.	
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 stakeholders identified by the site are categorized based on their influence and level of interest. The stakeholder list on the site classifies stakeholders according to their level of interest and their ability to influence or be influenced. All communication and documentation are stored in the "1.2.1-1.2.2 Stakeholder List & Communication Memorandum" document. This document also defines four potential levels of influence between the site and stakeholders: high, moderate, moderate-low, and low. The site engaged with the Sukorejo Health Agency to gather feedback related to WASH (Water, Sanitation, and Hygiene) issues and data.	
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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment The site has identified various water-related emergencies and documented a response plan for these situations. An existing emergency response plan has been developed and implemented, addressing risks and events related to: flooding, chemical spills into drainage systems, damage to tanks, breakdowns at the wastewater treatment plant (WWTP), drought, leaks from tanks, pipe blockages (including those in Tank 1000, Tank 280, the sump pit, and the WWTP), storm damage (specifically to the deep well), and soil erosion.

The site also implements a Hazard Identification Risk Assessment Determining Control (HIRADC) system, which has identified twelve specific hazards, including:

- Mechanical hazards
- Electrical hazards
- Thermal hazards
- Noise hazards
- Vibration hazards
- Radiation hazards
- Material/substance hazards
- Ergonomic hazards
- Work environment hazards
- Personal or behavioral hazards
- Gravity hazards
- Other pertinent hazards.

According to the verification document from 2025, there have been no incidents that required a water-related emergency response.

1.3.2 *Site water balance, including inflows, losses, storage, and outflows shall be identified and mapped*



Yes

Comment The site utilizes a Sankey diagram to accurately calculate and visualize its water balance. The water supply is sourced from four boreholes and is stored within a water storage tank. This stored water is subsequently distributed to various areas across the site, which include primary processing, secondary processing, office usage, firefighting, and domestic purposes.

The site has identified and addressed several critical issues, such as leakages, evaporation, and water absorption by tobacco materials. To ensure precise monitoring, all water input and output lines are equipped with metering devices.

Furthermore, wastewater generated, whether from industrial or domestic origins, is temporarily collected in sump pits. This wastewater is then extracted by specialized trucks for transfer to the Wastewater Treatment Plant and Sewage Treatment Plant facility. Industrial wastewater is managed by directing it into equalization tanks, while grease traps are employed in the STP for effective treatment.

Each sump pit is designed with specific technical specifications for monitoring and managing the COD levels and the presence of oil in the wastewater. In instances where COD levels exceed site WWTP standards, the tanker truck is programmed to transport such wastewater to a third-party WWTP vendor, PT PIER. Conversely, if COD levels are within acceptable limits but the wastewater contains oil, it will also be redirected to third-party vendors.

1.3.3 *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.*



Yes

Audit Number: AO-001647

Comment The site tracks changes in water usage rates on a yearly basis, monitoring both incoming and outgoing water throughout different stages of production. Daily water meter monitoring is conducted to ensure accurate calculations.

Additionally, the site analyzes the annual variance in water usage, including the consumption of incoming water and the discharge of outgoing water at various stages and forms within the plant. Routine management meetings are held daily, weekly, and monthly using the PDCA (Plan-Do-Check-Act) cycle. During these meetings, any deviations from targets are explained.

According to the performance report on site water usage ("1.3.3 Site Water Performance Data"), the site has reduced water leakage from 13.10% (July 2023-June 2024) to 11.25% (July 2024-June 2025).

The monthly extraction of water from deep wells totals 16,325 m³, sourced from four wells: DW1 supplies 0.42%, DW2 supplies 26.03%, DW4 supplies 44.96%, and DW5 supplies 28.59%. This water is distributed across various facilities, with the Primary Processing facility consuming the largest share at 43.08%. Other allocations include the printing process at 18.08%, machine-made kretek cigarettes at 10.20%, pipe leakage at 11.25%, and additional facilities making up the remaining percentages.

Within the major facilities, water usage is divided among production processes, utility operations, and domestic needs. Primary Processing allocates 40.93% to production and utilities (12.42% for production and 28.51% for utilities) and 2.15% for domestic needs. The printing process divides its usage, with 8.37% going to production and utilities (3.71% for production and 4.66% for utilities) and 2.23% for domestic use. Machine-made kretek cigarettes allocate 18.72% between production and utilities (15.63% for production, 0.22% for utilities, and 3.09% for sludge and other uses), with 1.83% for domestic needs.

The plant experiences water losses that total 100% of the input through various pathways: 21.09% is absorbed into tobacco material during production, while evaporation losses from cooling towers and boilers range from 0.01% to 12.89% across different systems. Additional losses include system blowdowns (0.01% to 5.05%), leakage at 11.25%, and uncounted meters at 2.78%. Wastewater treatment manages 14.37% at the Wastewater Treatment Plant (WWTP) and 12.43% through the Grey Water STP, with domestic wastewater further processed using biofill (7.34%) and sludge treatment (3.11%).

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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment The site monitors water quality across three primary categories: wastewater effluent, freshwater sources, and surface water bodies. For wastewater, the plant conducts monthly laboratory sampling (July 2024 - June 2025), measuring thirteen parameters, including pH, total suspended solids (TSS), biochemical oxygen demand (BOD), chemical oxygen demand (COD), phenol, ammonia, and fecal coliform, all assessed against governmental standards. All measurements consistently remain within regulatory limits. An annual variance is observed: TSS ranges from 5 to 22 mg/L (limit: 30 mg/L), BOD from 4 to 11 mg/L (limit: 12 mg/L), and ammonia from 0.17 to 9.6 mg/L (limit: 10 mg/L), with September 2024 displaying increases in TSS and December 2024 in ammonia levels. The treated wastewater is discharged into the Curah Banyak River.

The site conducts biannual monitoring of freshwater sources through four deep wells, assessing physical, microbiological, and chemical parameters in accordance with Health Minister Regulation No. 2/2023. The results indicate that all wells have demonstrated zero presence of E. coli and total coliform. Furthermore, the water quality parameters are stable, with pH levels ranging from 6.75 to 8.08, total dissolved solids (TDS) between 120 and 178 mg/L—well within the acceptable limit of 1000 mg/L—and negligible concentrations of heavy metals.

In addition, the quality of surface water is evaluated semi-annually at both upstream and downstream locations, encompassing 34 parameters as prescribed by Government Regulation No. 22/2021. The data shows a significant reduction in biological oxygen demand (BOD): upstream levels have decreased from 15 mg/L to 4 mg/L, while downstream levels fell from 16 mg/L to 3 mg/L over the monitoring period. Although fecal coliform counts display seasonal variability, they consistently remain below the acceptable threshold. Upstream values range from 200 to 230 MPN/100 mL, and downstream values range from 120 to 500 MPN/100 mL—both are well within the limit of 1000 MPN/100 mL.

From January to June 2025, the site encountered challenges with untreated wastewater that exhibited elevated Chemical Oxygen Demand (COD) levels and contained oil. To address this issue, the site engaged a third-party vendor, PT PIER, specialized in managing such wastewater. Records documenting the quantity of untreated wastewater delivered to PT PIER for treatment and discharge are maintained and readily accessible for review. The site also collected the laboratory results of wastewater from PT PIER that discharges to the ultimate water bodies. All parameters from treated wastewater from PT PIER met the legal requirements.

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 water pollution and has compiled a list of chemical materials available during the audit. At every point that could potentially cause pollution, the site provides spill kits. Additionally, some points are also guarded by a ban wall to prevent spillage from spreading directly to the environment.

1.3.6 *On-site Important Water-Related Areas shall be identified and mapped, including a description of their status including Indigenous cultural values.*  **Yes**

Comment The site has identified several onsite IWRAs, which include the following:
-Green open space
-Fishpond
-Infiltration well for a source of irrigation

All of these areas are in good condition. The site regularly monitors and maintains these IWRAs in accordance with the operation manual, ensuring their effective functionality and sustainability.

1.3.7 *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.*  **Yes**

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment The site identified all water-related costs across operational and stewardship activities during 2024-2025. Operational costs included deep well operations (four wells: DW1, DW2, DW4, DW5), drinking water provision, wastewater treatment plant operations (electricity, maintenance, water supply and sewer systems, domestic treatment), boiler and biomass fuel costs, and third-party wastewater disposal. Stewardship costs covered water quality laboratory testing for deep wells, domestic wastewater, industrial wastewater, mixed wastewater, water bodies, and outfall monitoring. Additional investments included technological maintenance for leak prevention, pipe upgrades, pressure-reducing valve installations, wastewater treatment equipment improvements, and steam optimization. Governance costs encompassed AWS certification audits, environmental permit updates, and stakeholder engagement programs.

Social value generated through water stewardship included ensuring regulatory compliance for safe water extraction and discharge, providing clean drinking water to employees and facilities, and conducting community programs such as catchment area tree planting, river clean-ups, public health and sanitation socialization, septic tank construction for local communities, stakeholder forums, and catchment area monitoring. These activities directly improved community wellbeing, public health, and strengthened relationships with local stakeholders.

Environmental value was created through comprehensive wastewater treatment, preventing pollution discharge, regular water quality testing, ensuring compliance with environmental standards, technological improvements reducing water leakage and optimizing resource use, steam system efficiency upgrades lowering water consumption, and ecosystem protection through catchment area tree planting and river restoration. Economic value stemmed from operational efficiency improvements, reduced water losses through infrastructure upgrades, and optimized treatment systems.

1.3.8 *Levels of access and adequacy of WASH at the site shall be identified.*



Yes

Comment The site provides WASH facilities for 3,097 workers across manufacturing areas, processing plants, administrative buildings, and warehouses. The site supplies Club brand bottled drinking water through dispensers positioned at 91 mapped locations, with additional temporary storage areas for water gallons distributed across production and office zones. Dedicated canteen and pantry facilities with proper handwashing stations serve workers across different operational areas. All facilities are accessible to workers during operational hours.

The facility maintains 200 toilets: 171 male toilets and 138 female toilets. This aligns with Permenkes No 2 Tahun 2023 (Government regulation for WASH), which requires 1 male toilet per 40 workers and 1 female toilet per 25 workers. Customer Survey Index reports from January-June 2025 show zero complaints at most locations, with 2 issues recorded in February at Pilot Plant and 1 issue each in April and May at Pilot Plant and Primary locations. Toilets include handwashing facilities with soap dispensers, sanitizer stations, instructional guides, waste bins, tissue supplies, and connections to the wastewater treatment plant. Male and female facilities are separated with privacy partitions. Maintenance schedules and cleaning standards are documented at each location. Visual materials on cleanliness and water conservation are posted in toilet areas. Workers access facilities based on their assigned work areas, with specific toilet locations designated for each operational zone.

1.4 *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.*

1.4.1 *The embedded water use of primary inputs, including quantity, quality and level of water risk within the site's catchment, shall be identified.*



Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment	The site identified the use of embedded water for primary inputs based on categorized Leaf and DIM. There are 77 vendors supplying Leaf and DIM, all of which are located outside the catchment area. Among these, 41 vendors are based in overseas countries such as Japan and Germany. To gather information about the embedded water usage from these vendors, the site sent out a questionnaire to all suppliers and outsourced services. The questionnaire inquired about their locations, water-related risks, water quality issues (including the frequency of water quality monitoring), and water quantity (specifically, water use per tonne of product manufactured).	
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
Comment	The site identified and monitored indirect water consumption from four outsourced services located within the catchment area. These services include cleaning, security, the clinic, and project buildings. The site investigated their locations, water-related risks, water quality issues—including monitoring frequency—and water quantity. All outsourced services utilize the same water source from the deep well on the site during their operations.	
1.5	<i>Gather water-related data for the catchment, including water governance, water balance, water quality, Important Water-Related Areas, infrastructure, and WASH</i>	
1.5.1	<i>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.</i>	 Yes
Comment	This year, there are no new policies or water governance initiatives introduced by the National Government or provincial level or other governmental institutions. The site actively engages with government entities, companies, universities, and non-governmental organizations in meetings and forums to discuss water and sustainability issues. Additionally, the External Affairs department will identify and communicate to the site if there are any changes/new policies related to water governance.	
1.5.2	<i>Applicable water-related legal and regulatory requirements shall be identified, including legally-defined and/or stakeholder-verified customary water rights.</i>	 Yes
Comment	No new water-related legal and regulatory changes from last year to the current audit time. The site kept and identified any updated legal requirements using an online system and from external affairs information. The legal and regulatory framework relevant to the site encompasses various national laws, regulations, and guidelines related to water withdrawal, wastewater quality, and discharge. It also includes requirements for water, sanitation, and hygiene (WASH). Since there are no indigenous communities in the site catchment area, no customary water rights exist in the site catchment area. The local population has free access to water from municipal and other sources.	
1.5.3	<i>The catchment water-balance, and where applicable, scarcity, shall be quantified, including indication of annual, and where appropriate, seasonal, variance.</i>	 Yes

Audit Number: AO-001647

Comment The site has partnered with Brawijaya University and the NGO STAPA to assess the water balance in the Kedunglarang Catchment area. This collaborative research is documented in the study titled "Baseline Study of Hydrology, Hydrogeology, Drinking Water Supply, and Sanitation in the HM Sampoerna Plant Sukorejo – Pasuruan Regency Area, Phase 2." To evaluate the water balance within the catchment, the study utilized various methods, including the F.J. Mock method, the Penman-Monteith method, and the Weibull method. Analysis of surface water data spanning the last 13 years (2010 to 2022) indicates a surplus condition in the Gumandar Sub-watershed, despite a downward trend linked to diminishing rainfall. Projections for surface water balance up to 2032 suggest that the surplus will persist. Specifically, the inflow is forecasted to be 13,364,467.67 m³ in 2025, while outflows—consisting of agricultural, evaporation, and residential use—are estimated at 447,115.09 m³, resulting in a balance of 12,917,352.58 m³. Groundwater balance for 2025 reveals an availability of 33,644,676.67 m³, with an expected outflow of 4,860,152.74 m³ for domestic and industrial uses, yielding a balance of 28,784,523.93 m³, which also indicates a surplus. However, the groundwater balance shows a declining surplus from 2010 to 2022, calculated based on infiltration potential against demand from domestic and industrial extraction. Over this 13-year period, surplus decreased significantly from 195,886,829.68 m³ in 2010 to 41,533,518.71 m³ in 2022, representing a decline of 79%. Despite this reduction, the balance has remained in surplus throughout. Annual variances were notable, with groundwater potential fluctuating from 199,680,654.93 m³ in 2010 to 46,202,326.70 m³ in 2022. Significant drops occurred in 2014 and 2015, while a temporary increase happened in 2017. Water demand has steadily risen, increasing from 3,793,825.26 m³ in 2010 to 4,668,807.99 m³ in 2022, with domestic demand growing from 2,098,307.94 m³ to 2,251,405.72 m³ and industrial demand from 1,695,517.32 m³ to 2,417,402.28 m³. Based on the research conducted at the site, a ten-year forecast (2023-2032) has been developed, indicating a continuing surplus of groundwater; however, a decline is anticipated. By 2032, the groundwater balance is projected to decrease to 6,307,334.53 m³, which represents an 85% decline from levels recorded in 2022. The groundwater potential is expected to drop significantly from 41,656,560.22 m³ in 2023 to 11,870,347.04 m³ by 2032. Meanwhile, total water demand is forecasted to increase from 4,681,192.34 m³ to 5,563,012.51 m³ during the same period. This anticipated decline in groundwater resources is largely attributed to decreasing rainfall and the loss of green open spaces, particularly in agricultural areas.

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.

Q Obs.

Audit Number: AO-001647

Comment The site conducts annual assessments of surface water quality at both upstream and downstream locations within the Kedunglarangan watershed. Laboratory analyses for physical, chemical, and biological parameters were performed during Semester 2 of 2024 and Semester 1 of 2025.

The physical parameters measured included temperature (29–30°C), total dissolved solids (176–200 mg/L), total suspended solids (12–42 mg/L), and color (24.1–40.9 Pt/Co). Chemical parameters included pH (7.1–8.0), dissolved oxygen (4–5 mg/L), biochemical oxygen demand (BOD5: 3–16 mg/L), and chemical oxygen demand (COD: 7–54 mg/L). Metals and nutrients such as total phosphate (0.07–1.28 mg/L), ammonia (0.6–0.63 mg/L), and copper (0.15 mg/L) were also measured. Biological indicators included fecal coliform levels (120–500 MPN/100mL) and total coliform levels (1300–7100 MPN/100mL).

Several parameters exceeded the regulatory limits under PP 22 Tahun 2021, Appendix VI, Class 2. Upstream exceedances included BOD5 (15–16 mg/L vs. limit 3 mg/L), COD (52–54 mg/L vs. 25 mg/L), total phosphate (0.55–1.28 mg/L vs. 0.2 mg/L), ammonia (0.6–0.63 mg/L vs. 0.2 mg/L), and copper (0.15 mg/L vs. 0.02 mg/L). Downstream, exceedances were noted for nitrite (0.16–0.22 mg/L vs. 0.06 mg/L) and cyanide (0.018–0.019 mg/L, near the 0.02 mg/L limit).

A variance analysis between the two sampling periods indicates an increase in TSS downstream (from 12 to 42 mg/L between June 2024 and July 2025), while BOD5 and COD decreased significantly (BOD5 from 16 to 3 mg/L and COD from 54 to 7 mg/L). Upstream, total phosphate dropped from 1.28 to 0.07 mg/L, and total coliform bacteria declined from 7100 to 1300 MPN/100mL upstream and from 4900 to 1300 MPN/100mL downstream.

According to the site's explanation, the variance in pollution levels between upstream and downstream is mainly attributed to the merging of multiple tributaries downstream, where pollutant loads from domestic wastewater and agricultural activities accumulate. Industrial discharges are required to undergo treatment, and companies must submit monthly wastewater analysis reports to authorities.

While Kedunglarangan serves as the primary groundwater source for the site, the surface water quality at upstream and downstream locations does not represent the broader groundwater quality across the catchment. No additional data were available to assess groundwater quality beyond the immediate plant area.

1.5.5 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. Yes

Comment The site has identified several Integrated Water Resource Areas (IWRAs) within the catchments. These include Forest Park, the Wildlife Conservation Area, Arjuno Mountain, six water springs, a community water supply serving five villages, communal wastewater treatment facilities located at Gunting, and a public toilet facility. The status of these IWRAs has been mapped and documented based on surveys, hydrology research, social mapping, media sources, and interviews with relevant stakeholders, including local community service providers and water-related agencies.

1.5.6 Existing and planned water-related infrastructure shall be identified, including condition and potential exposure to extreme events. Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment The water-related infrastructure within the site catchment encompasses a total of 18 facilities. Specifically, the community infrastructure includes 8 water wells and reservoirs situated in Ngadimulyo Village and Gunting Village. These facilities were developed between 2018 and 2021 and serve populations that range from several hundred to over two thousand individuals. Additionally, there are 9 identified natural springs distributed across the Prigen, Pandaan, Gempol, and Bangil areas. The names of these springs are Talunongko, Segaran, Banjarsari, Toyo Arang, Klampok, Plintahan, Kakek Bodo, Sumbersono, and Sumberbening/Kali Gobet. Moreover, Gunting Village features a communal wastewater treatment facility, referred to as IPAL Komunal, which was established in 2022. This facility is designed to manage household sewage while ensuring appropriate separation from drainage channels. All statuses of the infrastructure have been reported to be in good condition, necessitating minimal maintenance. The site coordination with stakeholders is in place to oversee the maintenance of these facilities. The likelihood of exposure to extreme environmental events has been assessed as unlikely, with any potential impacts expected to be limited to disturbances in production and domestic activities. An area that has been identified for improvement is the piping system within the Pajajaran sub-village of Gunting Village. Enhancements are required in this area due to inadequate slope considerations, which have resulted in reduced discharge towards higher elevation settlements.

1.5.7 *The adequacy of available WASH services within the catchment shall be identified.*



Yes

Comment The site has collected information on WASH within the catchment areas, which is sourced from public information available through village governments and provincial statistical data. Based on the data for the period 2025, indicate:
Drinking Water Services: 99.06% of Pasuruan Regency households have access to improved drinking water sources (0.31% bottled water, 11.03% plumbing, 42.55% drill/dug wells, 42.31% protected water sources, 2.86% non-protected water sources), while 0.94% rely on unimproved sources (surface water, including rivers, lakes, reservoirs, ponds, rainwater). Sanitation Services: 79.8% of Pasuruan Regency households have proper fecal disposal facilities through septic tanks, IPAL/SPAL systems, or other wastewater treatment infrastructure. 20.2% lack proper sanitation facilities and use alternative disposal methods. Hygiene Services: The document does not provide specific percentage data for access to hygiene services. Available information indicates ongoing education programs and facility provisions (public toilets, waste disposal sites) implemented over the past 5 years by local government and stakeholders, with the target achievement of 100% ODF status planned for completion by December 2025.

1.6 *Understand current and future shared water challenges in the catchment, by linking the water challenges identified by stakeholders with the site's water challenges.*

1.6.1 *Shared water challenges shall be identified and prioritized from the information gathered.*



Yes

Comment The site has identified shared water challenges based on various sources of data, including the "Water Risk Filter", stakeholder feedback from the community, NGOs such as STAPA and Cempaka, SETC, and the local government. The data also includes a baseline study, a water risk filter, and a drought and flood risk map from the National Disaster Management Authority. Using all of this information, the site has listed the shared water challenges and prioritized them accordingly. The list of shared water challenges includes water depletion, surface water quality, landslides, drought, floods, flash floods, forest fires, volcanic eruptions, and access to sanitation.

The site is engaging in discussions with Bapelitbangda (the Regional Development Planning, Research and Development Agency). On June 17, 2025, a meeting was held with 36 participants from various sectors, during which sanitation issues affecting 131 households in Pasuruan Regency were addressed. As a result of these discussions, a formal agreement was reached to tackle the identified sanitation challenges in the area.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

1.6.2 *Initiatives to address shared water challenges shall be identified.*



Yes

Comment The site has identified initiatives addressing nine shared water challenges in the Kedunglarangan watershed.

For access to sanitation, the site conducts clean and healthy living behavior (PHBS) and Community-Based Total Sanitation (STBM) socialization, collaborates with the government to handle inadequate sanitation households, constructs proper sanitation facilities for communities, and campaigns handwashing procedures through toilet stickers.

For surface water quality, the site performs monthly monitoring of treated wastewater and river water bodies, installs online COD sensors in outlet basins, improves wastewater treatment plant infrastructure, organizes waste normalization activities from Ngadimulyo TPS to landfills, and promotes PHBS to prevent littering in water bodies.

For water depletion, drought, flood, and flash flood challenges, the site maintains conservation areas as green open space with tree planting and biopores, collaborates on Payment for Environmental Services (PJLH) activities including rorak construction in water catchment areas, plants mango and pule trees with government partners, cooperates with Village Forest Management Organizations for tree monitoring, constructs eco-infiltration wells with PT Tirta Investama, implements wastewater recirculation for beltpress processes, transfers underground domestic pipes to above-ground to expedite leak handling, and organizes employee awareness campaigns for World Earth Day, World Environment Day, and World Water Day.

For forest fire risk, the site collaborates with Yayasan Cempaka to construct firebreaks in tree planting areas on Mount Arjuno slopes through PJLH programs.

For landslide risk, the site creates terraces on Mount Arjuno slopes through PJLH collaboration with the Village Forest Management Institution (LPHD), plants trees in company areas, optimizes existing infiltration wells, and participates in conservation launches with tree planting in watershed recharge areas.

For volcanic eruption risk, the site conducts disaster mapping by third parties and engages contractors in implementing emergency response plans (ERP) and emergency action plans (EAP) through safety briefings. All nine initiatives are implemented through documented collaboration with government agencies (Health Office, Dinas Perkim, DLH), community organizations (FORDAS, Yayasan Cempaka, LPHD), and private sector partners (PT Tirta Investama), with specific activities recorded, including dates, locations, and participant numbers from monitoring and evaluation data.

Additionally, the site is engaging in discussions with Bapelitbangda (the Regional Development Planning, Research, and Development Agency). On June 17, 2025, a meeting was held with 36 participants from various sectors, during which sanitation issues affecting 131 households in Pasuruan Regency were addressed. As a result of these discussions, a formal agreement was reached to tackle the identified sanitation challenges in the area.

Additionally, the site is engaging in discussions with Bapelitbangda (the Regional Development Planning, Research, and Development Agency). On June 17, 2025, a meeting was held with 36 participants from various sectors, during which sanitation issues affecting 131 households in Pasuruan Regency were addressed. As a result of these discussions, a formal agreement was reached to tackle the identified sanitation challenges in the area. The site also communicated with the Head of Ngadimulyo Village to identify households that do not have a toilet. This collaboration aims to target areas most in need of sanitation improvements and to develop tailored interventions for those households.

1.7 *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.*

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

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 has identified three types of water risks: physical, regulatory, and reputational. These risks can impact plant operations, the environment, local communities, and water catchment areas. For each identified risk, the site must specify the following: - Water risk prioritization based on frequency and magnitude to prioritize each risk. - Potential risk impact on the site. - Potential cost associated with the risk. - Water-related opportunity prioritization based on the likelihood of successful execution and positive impact. - Potential savings from mitigating the risk. - Existing initiatives the site is undertaking to contribute to risk mitigation.	
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 water-related opportunities and kept all information in a table that evaluates the likelihood, impact magnitude, and mitigation potential. Opportunities will be prioritized according to two key dimensions: the likelihood of successful execution, ranging from "Almost never" to "Very likely - certain execution," and the classification of positive impact, which varies from "Insignificant" to "Significant mitigation of water risk/improvement of environmental performance." Potential savings are categorized by priority levels: Very low, Low, Moderate, High, and Very high, with most mitigation actions typically falling into the "Low" priority savings category. Business opportunities can arise from several areas, such as reducing production shutdown risks through enhanced water management (addressing threats from floods, droughts, and water depletion), avoiding regulatory penalties and reputational damage by improving compliance with wastewater treatment, and demonstrating environmental leadership through conservation partnerships. The site quantifies these opportunities through measurable actions, which include optimizing existing infiltration wells, upgrading underground pipes to above-ground systems for faster leak detection, installing online monitoring sensors, and implementing scheduled maintenance programs for wastewater treatment systems. These measures aim to prevent economic losses from operational disruptions.	
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 conducted a thorough investigation into governance best practices from approximately 25+ organizations including government agencies (Ministry of Environment and Forestry, West Java Provincial Government, Environmental Services agencies), regulatory bodies (PROPER assessment authority), research institutions (universities like Brawijaya University), industrial associations, and community partnerships spanning national, regional, and local levels. The analysis covered governance frameworks from ministries implementing national water policies, provincial governments managing regional action plans, municipal agencies overseeing local water quality standards, and multi-stakeholder initiatives involving military task forces, academic institutions, and private sector collaborations. The site adopted these governance practices through stakeholder engagement forums involving participants from government agencies, industry, and community organizations. Water quality monitoring programs and a collaborative program with the Pasuruan Environmental agencies.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

- 1.8.2** *Relevant sector and/or catchment best practice for water balance (either through water efficiency or less total water use) shall be identified.* ✔
Yes
- Comment The site conducted a comprehensive investigation into best practices from over 100 organizations, including industrial companies within the same sector, major catchment area players, government agencies, universities, and community organizations across Indonesia's key watersheds. The benchmarking covered entities operating in the tobacco/consumer goods industries, diverse industrial sectors in the catchment area, and water stewardship leaders spanning national, catchment-based, and site-specific scales. Industrial sector leaders demonstrated water reduction targets through monitoring systems and comprehensive wastewater recycling approaches using 4R methodologies. The site adopted these insights by implementing water balance monitoring systems, a water conservation program, and cooperating with the Village Forest Management Organization in maintaining and monitoring trees planted in water catchment areas.
- 1.8.3** *Relevant sector and/or catchment best practice for water quality shall be identified, including rationale for data source.* ✔
Yes
- Comment The site conducted a thorough investigation into water quality best practices from approximately 30+ organizations across industrial, government, research, and community sectors, with data sources including corporate sustainability reports, government publications, academic journals, and verified project documentation.
- Key industrial practices identified include PT SHIN-ETSU's strict compliance with Water Quality Pollution Control acts and separation of process wastewater from rainwater discharge, PT Danone's implementation of the 4R approach (reduce, reuse, recycle, reclaim), PT KIIC and PT TMMIN's use of industrial Wastewater Treatment Plants meeting Environmental Agency standards, and Kawasan Industri Suryacipta Karawang's chemical-free WWTP utilizing aerobic bacteria and green technology from Hungary. Government and institutional practices encompass the Ministry of Environment and Forestry's Ecoriparian Program treating wastewater from 2,000 families and reducing BOD pollution by 1.4 tons annually, Satgas Citarum Harum's development of environmentally friendly wastewater treatment technologies and biofilters, PU Research and Development Agency's biofilter septic tank systems for urban areas, and collaborative initiatives like IUWASH's PDAM partnership for plumbing rejuvenation, addressing E-coli contamination.
- The site adopted several water quality management practices, including regular monitoring of fresh water quality according to applicable regulations, and implementation of wastewater treatment systems meeting Environmental Agency standards.
- 1.8.4** *Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified.* ✔
Yes
- Comment The site conducted a comprehensive investigation into Important Water-Related Areas (IWRA) maintenance best practices from approximately 25+ organizations across industrial, government, educational, and community sectors, including PT Gudang Garam's irrigation canal normalization and rice field improvements, PT TMMIN's development of a 16-hectare artificial forest supporting 36 tree species and six water bird species, the East Java Provincial Forestry Service's Nanduri Gunung reforestation program in Raden Soerjo Forest Park, Satgas Citarum Harum's watershed tree planting and biopore construction initiatives, Politeknik Negeri Malang's campus biopore development, and Brawijaya University's environmental sustainability biopore programs.
- Based on this research, the site adopted several IWRA maintenance practices, including on-site biopore installation, collaborated with PT Tirta Investama in the construction of an Eco Infiltration Well, and collaborated with the government to carry out PJLH (Payment for Environmental Services) activities by making roraks in water catchment areas
- 1.8.5** *Relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services shall be identified.* ✔
Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-001647

Comment The site investigated Safe Water, Sanitation, and Hygiene (WASH) best practices from over 8 organizations, including government health agencies, regulatory bodies implementing Five Pillars of Community-Based Total Sanitation (STBM) program, community welfare organizations (Ibu PKK), environmental services agencies establishing sanitation standards, international health organizations (WHO) providing safe water guidelines, national authorities setting workplace WASH facility standards, regional governments implementing drinking water action plans, and internal AWS assessment protocols. The analysis examined WASH frameworks from government sanitation programs, health center collaborative initiatives, community-based education systems, and regulatory standards for equitable access to water and sanitation services.

The site adopted several WASH best practices, such as socialization of clean and healthy living behavior (PHBS) to the community to avoid littering into water bodies, construction of proper sanitation for the community to avoid pollution due to household wastewater discharged into the river, and organizing Ngadimulyo TPS normalization activities at the landfill to reduce the potential for water pollution from waste.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

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	The site has demonstrated its commitment to the Alliance for Water Stewardship standard through a statement endorsed by the Head of Manufacturing East, Mr. I Made Mahendra Wijaya. The statement comprehensively covers all aspects of the standard. The site has prominently displayed this commitment on notice boards located in the lobby and public areas of the plant. Additionally, the site has communicated its commitment to stakeholders through engagement sessions and emails to all vendors and stakeholders.	
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 maintains water and wastewater regulatory compliance through the Online System and updates information from External Affairs. The responsibilities have been documented in the "AWS Organization," and the person responsible for legal correspondence has also been documented. Each year, the site reviews all compliance regulations in the management review process. The site also used the Red-on-Line system, which is a global, comprehensive EHS solution for regulatory compliance to effectively maintain EHS compliance. The system tracks 88 total water-related regulations, with a compliance status breakdown of 43.18% compliant, 2.27% for information, and 54.55% not applicable, as of June 2025. Additionally, each month, the site reports all water activity to the government to ensure that all parameters meet the 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-001647

Comment The site has developed an AWS strategy that defines the company's vision, mission, and goals for water stewardship through a formal Water Stewardship Commitment with five specific objectives: (1) assess water-related risks and shared challenges at plant and catchment levels to identify mitigation opportunities, (2) ensure compliance with water-related laws and regulations, (3) ensure quality of water used and discharged meets local regulations and AWS standards, (4) create, maintain, and evaluate the Sukorejo Plant Water Management Strategy Plan including location and catchment-based actions targeting five AWS outcomes (good water governance, good water quality status, sustainable water balance, important water-related areas, and WASH), and (5) involve relevant stakeholders from various sectors for joint initiatives supporting catchment areas and shared water resources. The document was signed by Aji Sumantoro (Former Head of Manufacturing).

2.3.2 *A water stewardship plan shall be identified, including for each target:*

- *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 identified both on-site and catchment of water stewardship plan (WSP). The WSP develop 19 initiatives with timeframes from years 2025-2027. The plan includes 14 on-site initiatives (cooling tower monitoring, steam pipe optimization, motorized valve installations, WWTP improvements, blowdown automation, employee campaigns, tree planting) and 5 catchment-based initiatives (stakeholder discussions with Bapelitbangda, PHBS socialization in Ngadimulyo village, AWS Stakeholder Forum with 93 participants, septic tank construction for 131 households, and proposed eco infiltration well collaboration). Each target includes specific measurable outcomes: water leak reduction of 75%, steam leakage reduction of 30%, water savings of 150,000-500,000 kg/year, wastewater compliance at 100%, and septic tank construction for 131 households. Budgets range from \$0 (campaigns) to \$83,656 (temperature control valve), with clear timelines (Q1-2025 to Q4-2027) and responsible personnel identified. Progress tracking shows completion rates from 60-100%, with monitoring mechanisms like monthly steam usage evaluations and SHARP awareness programs achieving 75-90% employee participation targets. All targets directly link to AWS outcomes across five categories: Good Water Governance (stakeholder engagement, employee campaigns), Sustainable Water Balance (leak prevention, steam optimization saving up to 600,000 kg water/year), Good Water Quality Status (WWTP diffuser replacement achieving 100% compliance, bottom blowdown optimization), Important Water Related Areas (12,935 trees maintained on-site), and Safe Water, Sanitation and Hygiene (10 septic tanks constructed, PHBS socialization reaching 60 participants with 83% knowledge improvement). Each initiative references specific best practices from section 1.8, including PMI Affiliate guidelines #10 (water-efficient fittings), #25 (sustainability campaigns), #56 (toilet provision), and collaborations with Satgas Citarum Harum (#57 on clean living education). The plan demonstrates SMART criteria: Specific (installation locations like "DRYR-0006 service panel"), Measurable (percentage reductions, participant counts, savings in USD), Achievable (technologies like motorized valves, TDS controls), Relevant (addressing physical water scarcity, regulatory compliance, reputational risks), and Time-bound (quarterly milestones from Q1-2025 through Q4-2027). Financial allocations total approximately \$200,000 for technology initiatives, with payback periods exceeding 5-10 years and estimated lifetimes over 10 years for infrastructure improvements, ensuring long-term value creation both on-site (energy savings of \$4,670-\$5,615 annually) and in the catchment area (increased water availability, reduced river pollution from 131 households' wastewater).

2.4 *Demonstrate the site's responsiveness and resilience to respond to water risks*

Audit Number: AO-001647

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 engaged in collaborative efforts with Brawijaya University, key industrial stakeholders, the Pasuruan Watershed Forum, and the NGO STAPA to develop a comprehensive water risk mitigation plan. As part of these partnerships, we are working alongside Yayasan Cempaka to implement the Forest and Catchment Area Conservation (KHDTA) program, which involves the planting and maintenance of 1,051 trees in the Curahtangkil Block. This initiative is designed to complement previous conservation efforts in upstream areas, with activities scheduled for 2024. In 2025, the site collaborated with the STAPA Foundation and the Cempaka Foundation, with support from the Pasuruan Watershed Forum and the Pasuruan District Environmental Service. Together, we will initiate the Payment for Environmental Services (PJLH) program, allocating a budget of Rp. 50,000,000 to the Environmental Service Provider, specifically the Village Forest Management Institution (LPHD) of the Lokajaya Binangun Village Dayurejo Community Group in Prigen. The primary objective of the Program for Environmental Management (PJLH) is to sustain an area of 5 hectares, ensuring the preservation of at least 2,000 trees and maintaining the associated ecological and ecosystem functions within the region.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

3	STEP 3: IMPLEMENT - Implement the site's stewardship plan and improve impacts	
3.1	<i>Implement plan to participate positively in catchment governance.</i>	
3.1.1	<i>Evidence that the site has supported good catchment governance shall be identified.</i>	 Yes
Comment	The site has actively supported good catchment governance through collaborative initiatives from 2024 to 2025. Key activities include: - KHDTA (the Forest and Catchment Area Conservation) Program Launch: On December 16, 2024, the site participated in a tree planting event with 39 attendees. - AWS Stakeholder Forum: Organized on August 5, 2025, this event attracted 93 participants from government, academia, industry, and NGOs, featuring presentations on water risks and a Q&A session. - Discussions with Bapelitbangda (the Regional Development Planning, Research and Development Agency): On June 17, 2025, 36 participants from various sectors addressed sanitation issues affecting 131 households in Pasuruan Regency, resulting in a formal agreement. - The site also shares data through collaborations, highlighting presentations from Brawijaya University on water governance and Bapelitbangda on sanitation strategies during the AWS forum. Aqua/Danone provided insights on WASH programs. Additionally, the site works with LPHD (Environmental Conservation Foundation) on Payment for Environmental Services programs, conducting a monitoring session on May 2, 2025, to evaluate tree planting, land terracing, and water retention structures. Documentation, including attendance lists and meeting minutes, has been maintained for transparency and accountability.	
3.1.2	<i>Measures identified to respect the water rights of others including Indigenous peoples, that are not part of 3.2 shall be implemented.</i>	 Yes
Comment	No Indigenous Peoples have been identified in the site's operational area. Residents access water through a combination of municipal supply, private wells, and community-based water providers.	
3.2	<i>Implement system to comply with water-related legal and regulatory requirements and respect water rights.</i>	
3.2.1	<i>A process to verify full legal and regulatory compliance shall be implemented.</i>	 Yes
Comment	All national and local legal requirements and regulations have been met by the operational processing plant on the site, including the wastewater discharge requirements. The permission documents are appropriately documented and up to date. The site maintains water and wastewater regulatory compliance through the Red-On-Line digital system. This global EHS solution provides weekly monitoring emails and dashboard notifications for new or updated regulations. The site conducts monthly internal meetings to evaluate compliance status updates in the Red-On-Line platform and monitor regulatory changes through both the platform and government websites. Environmental permit tracking is maintained by the sustainability team, which monitors active periods and the status of all water-related permits.	
3.2.2	<i>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.</i>	 Yes

Audit Number: AO-001647

Comment No specific indigenous groups are located within the site plant catchment areas. All national and local legal requirements and regulations have been met by the operational processing plant on the site, including the wastewater discharge requirements

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 implemented sustainable water balance initiatives demonstrating measurable progress toward WSP targets through on-site optimization and catchment-level conservation activities. On-site water efficiency programs achieved significant reductions in steam system losses through four completed initiatives (Q1-Q3 2025): steam optimization with motorized valve installations on DRYR-0006, Screw Conditioning Clove, FBD Cres Line, and DC3 Krosok service panels targeting water usage reduction when machines are idle; optimization of bottom blowdown frequency from 20 minutes every 20 seconds to 24 hours every 10 seconds using automatic TDS control, achieving 190,000 kg steam savings per year; replacement of manual valves with temperature control valves in feed water tanks, achieving 50,000 kg steam savings per year; and steam pipe relayout in PP1 reducing 30% potential steam leakage by eliminating unnecessary components. The cooling tower optimization initiative (Q1-Q4 2025, 60% progress) targets 75% water leak identification through integrated control system monitoring. Catchment-level water balance initiatives focused on reforestation and watershed conservation to enhance water retention and availability. The site completed multiple tree planting programs: participation in KHDТА Forest and Watershed Conservation Program (December 16, 2024) with 39 participants achieving 100% attendance; replacement of 134 dead/unsafe trees with 248 new trees (January-February 2025) maintaining 12,935 total site trees; donation of 30 pule trees to East Java Provincial Environment Agency (October-December 2024); donation of 2,500 mango trees to Pasuruan Regency Government (January 20, 2025); and planting 48 trees for charging station replacement (December 23, 2024) maintaining 12,821 total trees. The site implemented Payment for Environmental Services (PJLH) program (December 16-31, 2024) with 1,051 trees planted in Curah Tangkil catchment area, 1,000 rorak units constructed, 0.5 hectares of terrace fields completed, and 1,000 meters of fire breaks established. PJLH monitoring (Q2-Q4 2025) documented maintenance of 500 trees through August 2025, construction of 3 water reservoirs, terracing of 0.5 hectares, and 1,000-meter firebreak completion. External program evaluation (July-August 2025) monitored sustainability of 2019-2024 initiatives including tree planting, water access, biopore, and TPS normalization facilities to ensure long-term water balance impact.

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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment The site has implemented water efficiency targets to address water scarcity as a shared water challenge in the Kedunglarangan watershed. Water depletion is a medium-priority risk due to climate change, pollution, increased demand, and urbanization. Although a baseline study shows a water surplus until 2032, the site is actively improving efficiency and conserving water.

On-Site Water Efficiency Initiatives:

Steam System Optimization (Q1-Q3 2025) through:

- Installed motorized valves on four service panels (DRYR-0006, Screw Conditioning Clove, FBD Cres Line, DC3 Krosok) to reduce steam waste when idle.
- Optimized bottom blowdown from every 20 minutes for 20 seconds to once every 24 hours for 10 seconds, saving 190,000 kg of steam annually.
- Replaced manual valves with temperature control valves in feed water tanks, saving an additional 50,000 kg of steam per year.
- Modified steam pipes in PP1 to cut potential leakage by 30%.
- Cooling tower optimization (60% complete) aims to identify 75% of water leaks.

Catchment-Level Water Conservation Initiatives:

- Implemented reforestation and water retention projects. The PJLH program planted 1,051 trees, built 1,000 water catchment holes, created 0.5 hectares of terrace fields, and established 1,000 meters of firebreaks in December 2024.
- Achieved 100% participation in the KHDITA tree-planting program with 39 participants; also donated 30 pule trees and 2,500 mango trees to local governments.
- Replaced 134 dead trees with 248 new ones, maintaining a total of 12,935 trees. Plans for collaboration with PT Tirta Investama for eco-infiltration wells are set for Q3-Q4 2026 to enhance groundwater recharge.
- Conducted employee engagement campaigns, including World Water Day 2025 (over 1,000 viewers) and World Earth Day 2025, with 137/131/87 participants. The SHARP program aims for over 90% accuracy in water management knowledge, with 75% progress expected by Q4 2025.

3.3.3 *Legally-binding documentation, if applicable, for the re-allocation of water to social, cultural or environmental needs shall be identified.* ✔
Yes

Comment The site is situated in an industrial area, and the plant gets its water from a deep well. All wastewater is sent directly to the wastewater treatment unit (WWTP) before being released into water bodies. After conducting interviews and visiting the site, no legal issues were found. There is no reallocating water for social, cultural, or environmental uses.

3.4 *Implement plan to achieve site water quality targets*

3.4.1 *Status of progress towards meeting water quality targets set in the water stewardship plan shall be identified.* ✔
Yes

Audit Number: AO-001647

Comment The site has implemented water quality targets through wastewater treatment optimization, regulatory compliance, and catchment pollution reduction in 2024-2025. Several implemented programs include:
Wastewater treatment targets:
WWTP diffuser replacement (April 25, 2025, 100% completed) achieved 100% wastewater discharge quality compliance by improving oxygen transfer efficiency. Monthly wastewater monitoring (Q1-Q2 2025, 100% completed) confirmed that effluent meets government regulation limits. Bottom blowdown optimization (Q1-Q3 2025, 100% completed) reduced discharge frequency from 20 minutes/20 seconds to 24 hours/10 seconds using automatic TDS control, preventing system overload.
Regulatory monitoring targets:
Water bodies monitoring (Q1-Q2 2025, 100% completed) achieved 100% compliance with semesterly government obligations at outfall, upstream, and downstream points. Clean water monitoring (Q1-Q2 2025, 100% completed) achieved 100% compliance with Minister of Health Regulation 2 of 2023 through semesterly testing with an accredited laboratory.
Pollution prevention targets:
Chemical spill training (October 18, 2024, 100% completed) achieved zero pollution incidents with 100% participants scoring ≥80 on post-tests (exceeding 80% target).

3.4.2 *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.* ✔
Yes

Comment The site has identified water quality improvement initiatives for surface water in the Kedunglarangan watershed as a medium-priority challenge (priority 1). A baseline study found that all river sampling points are classified as lightly polluted, mainly due to soil erosion, animal waste, human waste, and industrial discharge. Several implemented programs include:
Wastewater Treatment Improvements:
Upgrades the Wastewater Treatment Plant (WWTP), including the replacement of outdated diffusers in aeration tanks since April 25, 2025. This upgrade improves oxygen transfer efficiency and wastewater treatment. A Preventive Maintenance schedule ensures 100% compliance with discharge quality standards, reducing odors and process disruptions. Monthly monitoring of treated wastewater ensures compliance with government regulations. Improvements have also been made to bottom blowdown frequency, now set to 24 hours every 10 seconds, optimizing treatment processes by separating water quality control from solid sediment management.
Water Quality Monitoring:
Biannual water quality monitoring in Q1 and Q2 of 2025 has been completed at outfall, upstream, and downstream points, achieving 100% compliance with government monitoring requirements. Accredited external laboratory tests confirm that water quality meets Minister of Health Regulation 2 of 2023.
Pollution Prevention Training:
Refresher training on managing chemical spills and hazardous waste was completed on October 18, 2024, with no incidents of pollution reported. All participants scored above 80 on post-tests, demonstrating proficiency in waste management regulations.
Addressing Domestic Pollution:
The WSP addresses sanitation issues affecting 131 households in Ngadimulyo village that discharge waste into rivers. On July 18, 2025, the normalization of domestic waste at the Ngadimulyo Temporary Disposal Site (TPS) was completed, with 70% of waste transported to the landfill, exceeding the 50% target. Educational programs on waste management resulted in over 80% participants understanding.
A septic tank construction initiative is underway, with plans to build ten tanks to curb E. coli pollution from open defecation, surpassing the initial goal of five units.
Monitoring and Evaluation:
External monitoring and evaluation in July and August 2025 assessed the the sustainability of water quality initiatives, from 2019 to 2024, including clean water access and the normalization of TPS. This evaluation identified current facility conditions and revitalization needs for long-term water quality protection in the catchment area.

Audit Number: AO-001647

Table with 3 columns: ID, Description, Status. Row 1: 3.5, Implement plan to maintain or improve the site's and/or catchment's Important Water-Related Areas. Row 2: 3.5.1, Practices set in the water stewardship plan to maintain and/or enhance the site's Important Water-Related Areas shall be implemented. Row 3: Comment, The site has implemented IWRA maintenance practices... Row 4: 3.6, 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. Row 5: 3.6.1, 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.

Audit Number: AO-001647

Comment The site has implemented adequate WASH provisions documented in the WSP through on-site facilities for workers and catchment-level sanitation improvements addressing access to sanitation as a medium-priority shared challenge. Several implemented programs include:

On-site WASH provisions for workers:
The site ensures safe drinking water provision to all workers, sourced from a local water bottling company and closely monitored for quality standards adherence. The site independently tested bottled drinking water, with laboratory results confirming all parameters for safe drinking water regulation were met. Clean water quality monitoring (Q1-Q2 2025, 100% completed) achieved 100% compliance with Minister of Health Regulation 2 of 2023, conducting semesterly testing with accredited external laboratory to verify fresh water meets quality standards for worker use and production.

Adequate sanitation facilities, including bathrooms, hand washing, and shower facilities, are readily available to all workers on-site. The WSP documents water stewardship campaign through SHARP program (Q1-Q4 2025, 100% completed), achieving ≥90% employee correct responses on environmental management questions (exceeding ≥80% target), with 12,049 correct responses from 12,075 total (99.78% accuracy). The campaign shared water management information, AWS-related content, and water-saving reminders through posters, articles, and videos on videotrons, raising employee awareness about water conservation and sanitation practices.

Catchment-level WASH improvements:
The site addresses unimproved sanitation affecting 131 households in Ngadimulyo village, lacking proper toilets and discharging wastewater directly into rivers. Bapelitbangda discussion (June 17, 2025, 100% completed) with 36 participants from government, agencies, industrial sectors, and communities achieved 100% agreement to collaboratively improve sanitation, raising stakeholder awareness of domestic wastewater pollution risks.

The socialisation of clean and healthy living behaviours (PHBS) and community-based total sanitation (STBM) initiative, completed on July 18, 2025, successfully engaged 60 participants, surpassing the target of 50. Notably, 83% of participants demonstrated a strong understanding of clean and healthy living practices as well as community-based total sanitation, exceeding the 75% target. This educational effort plays a crucial role in preventing water body contamination by promoting proper sanitation practices within the community.

Septic tank construction (Q3-Q4 2025, 75% progress) verified 131 households without proper sanitation through data validation and is constructing 10 septic tanks (exceeding the initial 5-unit target) to reduce E.coli bacterial pollution from open defecation. Beneficiary analysis identifies households meeting criteria: lacking septic tanks, disposing fecal waste into rivers, located on riverbanks or within 200 meters, underprivileged families, and expressing willingness to accept a proper toilet program.

3.6.2 *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.*


Yes

Comment The site catchment area does not contain any indigenous groups. However, to support the local communities surrounding the plant operations, the site has implemented workshops to increase awareness and share basic principles of sanitation and hygiene (WASH). These workshops emphasize the importance of practicing clean and healthy behaviors, particularly the need to avoid littering in rivers and drainage systems. This initiative can help prevent flood risks in the nearby communities within ring 1 (Ngadimulyo village). A total of 60 participants attended the workshop.

According to the Indigenous Territory Registration Agency (BRWA), there are no indigenous communities in the Kedunglarangan Watershed area. The site's human rights assessment on water and sanitation achieved full scores in commitment, impact assessment, action implementation, monitoring, communication, and remediation.

3.7 *Implement plan to maintain or improve indirect water use within the catchment:*

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

- | | | |
|--------------|--|---|
| 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 | <p>The site did not address indirect water use in the WS plan because all 77 suppliers of primary inputs are located outside the catchment area. Among these suppliers, 41 are based in countries such as Japan and Germany. Based on hydrology research, there are no issues related to indirect water use in the catchment area, as the water sources from the site catchment are projected to be surplus for the next 10 years.</p> | |
| 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 | <p>The site has engaged all suppliers and service providers and has collected data through questionnaires. It monitored indirect water consumption from four outsourced services located within the catchment area. All evidence related to email correspondence with suppliers and service providers is available.</p> <p>The types of service providers that utilize water from the site catchment include cleaning, security, the clinic, and project buildings. The site investigated the locations, water-related risks, water quality issues—including monitoring frequency—and water quantity for each of these services. All outsourced services use water from the same deep well on the site during their operations.</p> | |
| 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 | <p>The site has engaged all relevant stakeholders through various channels, including emails, social media, videotrons, posters, virtual meetings, and in-person meetings. Evidence of email communication and reports is available. Among these stakeholders is PT PIER, which provides outsourced wastewater treatment plant services.</p> <p>Additionally, a stakeholder meeting was held on August 5, 2025, where discussions focused on water risks and the activities presented by representatives from different sectors: academia (Brawijaya University), government (Bapelitbangda), and the private sector. Documentation of the meeting is available. The local community, including women's participation, was also involved in the forum.</p> | |
| 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 |

Audit Number: AO-001647

Comment The site has established a clear link between the best practices identified in the best practice list and the governance actions implemented in the Water Stewardship Plan. Several water governance best practices have been implemented:
Best Practice #25: "Develop campaigns with stakeholders about sustainable water management." This practice promotes water stewardship awareness through stakeholder education and engagement activities. The WSP includes campaigns through SHARP (Safety Scenario & Hazard Awareness Program) targeting ≥90% employee correctness on water management questions, achieving 75% progress by Q4-2025. The site implemented PHBS and STBM socialization on July 18, 2025, in Ngadimulyo village, reaching 60 participants with 83% achieving understanding scores. The site conducted World Water Day 2025 commemoration in Q1-2025 with more than 1,000 employee viewers, and World Earth Day 2025 on April 22, 2025, with 137, 131, and 87 participants across three games covering waste segregation, catchment area awareness, and environmental management quizzes.
Best Practice #35, #39, #40, #73: "Tree planting/reforestation in mountainous areas and watershed conservation." This practice focuses on maintaining water retention and absorption through forest conservation. The WSP documented tree replacement initiative in January-February 2025, replacing 134 dead/unsafe trees and planting 248 new trees, maintaining total site trees at 12,935. The site participated in KHDFA Forest and Watershed Conservation Program on December 16, 2024, with 39 participants achieving 100% attendance. The site collaborates with LPHD on PHLH programs, with monitoring on May 2, 2025, showing 5,200 seedlings (April 2025) and 3,020 seedlings (May 2025) planted, land terracing 2,000 meters completed toward 5,400-meter target, and sekat bakar construction 3,000 meters completed toward 5,000-meter target.
Best Practice #56, #57: "Provision of toilets and Clean and Healthy Living Education Program." This practice addresses unimproved sanitation to reduce water pollution. The WSP includes a septic tank construction initiative (Q3-Q4 2025) targeting the construction of 10 septic tanks for 131 households without proper sanitation in Ngadimulyo village, achieving 75% progress. The site conducted discussions with Bapelitbangda on June 17, 2025, attended by 36 participants, achieving 100% agreement to collaboratively address sanitation issues in Pasuruan Regency.
Best Practice #74: "Education and Corporate Action Sharing regarding water conservation." This practice promotes stakeholder collaboration and knowledge sharing. The WSP documented the AWS Stakeholder Forum on August 5, 2025, with 93 participants from government, academia, industry, and NGOs, featuring presentations from Brawijaya University on Sub-DAS Gumandar water governance, Bapelitbangda on sanitation strategies covering 131 households, and Aqua/Danone on WASH programs and positive water impact validation.

3.9.2 Actions towards achieving best practice, related to targets in terms of water balance shall be implemented. Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment

The site has established a clear link between best practices and water balance targets documented in the WSP, implementing efficiency improvements and conservation measures addressing water depletion as a medium-priority shared challenge (priority 4) in the Kedunglarangan watershed. Several water balance best practices have been implemented, including:

Best Practice #10: "Promoting and encouraging the installation of water efficient fittings (i.e., water aerators in toilets, sensors on water taps etc.) for potable water reduction." This practice reduces water consumption through efficient fixtures and monitoring systems. The WSP includes cooling tower optimization in SKM (Q1-Q4 2025, 60% progress), targeting 75% water leak identification and maximizing water flow monitoring in the distribution system through integrated control systems. The initiative installs water management systems to monitor and control cooling tower flow, helping identify leaks and optimize water usage. Steam optimization initiatives (Q1-Q3 2025) installed motorized valves on four service panels: DRYR-0006, Screw Conditioning Clove, FBD Cres Line, and DC3 Krosok (100% completed), improving steam distribution accuracy to eliminate waste when machines are idle. The site implemented water-saving campaign stickers in toilets and transferred underground domestic pipes to above-ground configurations for early leak detection.

Best Practice #9: "Implemented water 4R approach (reduce, reuse, recycle, or reclaim)." This practice maximizes water efficiency through systematic reduction and reuse. The WSP documents optimization of bottom blowdown frequency (Q1-Q3 2025, 100% completed), reducing discharge from 20 minutes every 20 seconds to 24 hours every 10 seconds using automatic TDS control, separating water quality control (TDS) from solid sediment management. This achieved 190,000 kg steam savings per year (water: 190,000 kg/year, natural gas: 12,667 Nm³/year, electricity: 1,493 GJ/year). Temperature control valve replacement (Q1-Q3 2025, 100% completed) upgraded steam injection systems in feed water tanks to increase water temperature before boiler entry, reducing boiler workload and achieving 500,000 kg steam savings per year (water: 500,000 kg/year, natural gas: 33,333 Nm³/year, electricity: 1,297 GJ/year). Wastewater treatment water recirculation program for beltpress process reuses treated water, reducing freshwater demand.

Best Practice #13: "Water-saving technologies and optimized settings - re-use of reverse osmosis reject water / meteoric water." This practice optimizes water systems to minimize losses. The WSP includes steam pipe relayout in PP1 (Q1-Q2 2025, 100% completed), simplifying piping layout by removing unnecessary parts and optimizing steam distribution pipes, reducing 30% potential steam leakage, and eliminating equipment that could cause water waste through failures. The initiative prevents environmental problems related to excessive water use by reducing pressure drops, heat losses, and unnecessary steam leaks common in complex systems.

Best Practice #35, #39, #40, #73: "Tree planting/reforestation in mountainous areas and watershed conservation for water retention and absorption." This practice maintains Important Water Related Areas through forest conservation. The WSP documents multiple reforestation initiatives: PJLH program implementation (December 16-31, 2024, 100% completed) with 1,051 trees planted in Curah Tangkil catchment area (Blok Curah Tangkil), 1,000 rorak units constructed for water retention, 0.5 hectares terrace fields completed, and 1,000 meters fire breaks established to prevent fire spread while facilitating forest access. PJLH monitoring and evaluation (Q2-Q4 2025, 100% completed) documented maintenance of 500 trees through August 2025, construction of 3 water reservoirs at planting sites, terracing completion, and firebreak construction. KHDTA Forest and Watershed Conservation Program participation (December 16, 2024, 100% completed) achieved 100% attendance at all activities with 39 participants in tree planting at Prigen, targeting minimum 75% active participation to reduce flood risk, supply future water availability, reduce flashflood, and improve forest community economic value. On-site tree maintenance (January-February 2025, 100% completed) replaced 134 dead/unsafe trees with 248 new trees maintaining 12,935 total site trees, ensuring continuous water retention capacity. External collaborations include donation of 30 pule trees to East Java Provincial Environment Agency (October-December 2024, 100% completed) supporting provincial climate change mitigation efforts, and donation of 2,500 mango trees to Pasuruan Regency Government (January 20, 2025, 100% completed) supporting government reforestation programs while providing economic benefits to villagers through fruit production.

Best Practice #8: "Constructing infiltration ponds to artificially increase groundwater recharge." This practice enhances water infiltration capacity in catchment areas. The WSP

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

proposes collaboration with PT Tirta Investama (Q3-Q4 2026, proposed status) for eco infiltration well construction in catchment areas, targeting an 80% reduction in waterlogging during the rainy season and involving 100 residents in training and socialization. The proposed design uses environmentally friendly materials available locally, appropriate for soil conditions and rainfall volume, to increase groundwater absorption and reduce flood risk while supplying future water availability.

3.9.3 *Actions towards achieving best practice, related to targets in terms of water quality shall be implemented.*  **Yes**

Comment The site has linked water quality best practices to actions documented in the WSP, targeting surface water quality as a medium priority. Several water quality best practices have been implemented, including:
Best Practice #23: "Regular review and strict compliance with specific facility using hazardous substances pertaining to the Water Quality Pollution Control Act and installation standards for designated storage facilities."
Conducted chemical spills and hazardous waste management training (October 18, 2024, 100% completed), ensuring zero pollution incidents and that all participants scored ≥80 on post-tests.
Best Practice #26: "All production wastewater is ensured to be safe for the environment through the use of industrial Wastewater Treatment Plants (IPAL) in accordance with Environmental Agency (BLH) standards."
Implemented a WWTP diffuser replacement (April 25, 2025, 100% completed) to ensure treated wastewater meets Environmental Agency standards, achieving 100% compliance. Monthly monitoring confirmed that effluent met government limits. Optimized bottom blowdown frequency to every 24 hours for 10 seconds to prevent system overload.
Best Practice #80: "Optimizing WWTP to Improve Water Quality."
Improved WWTP efficiency by replacing diffusers and implementing preventive maintenance schedules to enhance biological processes and reduce odors.
Best Practice #11: "Monitor water quality." This practice ensures ongoing compliance verification. Water bodies monitoring (Q1-Q2 2025, 100% completed) achieved 100% compliance with semesterly obligations at outfall, upstream, and downstream points. Clean water monitoring (Q1-Q2 2025, 100% completed) achieved 100% compliance with Minister of Health Regulation 2 of 2023 through accredited laboratory testing.
Best Practice #56, #57: "Provision of toilets and Clean and Healthy Living Education Program."
Constructing septic tanks (Q3-Q4 2025, 75% progress) for 131 households to reduce E. coli pollution. Completed PHBS/STBM socialization on July 18, 2025, with 83% of 60 participants demonstrating proper sanitation understanding.
Best Practice #33: "Improving waste management program."
Normalized waste collection at Ngadimulyo TPS (July 18, 2025, 100% completed), transporting 70% of waste to landfills to reduce contamination risks. Waste segregation training ensured 100% of participants scored above 80, preventing disposal into water bodies.

3.9.4 *Actions towards achieving best practice, related to targets in terms of the site's maintenance of Important Water-Related Areas shall be implemented.*  **Yes**

Audit Number: AO-001647

Comment The site has established clear links between IWRA best practices and implemented maintenance actions documented in the WSP, addressing water depletion, drought, flood, and flash flood as shared challenges. Several IWRA best practices have been implemented, including:

Best Practice #35, #39, #40, #73: "Tree planting/reforestation in mountainous areas and watershed conservation."
On-site: Tree replacement (January-February 2025, 100% completed) removed 134 dead/unsafe trees, planted 248 replacements, and maintained 12,935 total trees. Charging station replacement (December 23, 2024, 100% completed) planted 48 trees after removing 3, maintaining 12,821 total trees across 85+ species.
Catchment: KHD TA program (December 16, 2024, 100% completed) achieved 100% participation with 39 participants planting trees in Prigen. PJLH implementation (December 16-31, 2024, 100% completed) planted 1,051 trees in Curah Tangkil with 1,000 rorak units, 0.5 hectares of terrace fields, and 1,000 meters of fire breaks. PJLH monitoring (Q2-Q4 2025, 100% completed) maintained 500 trees, constructed 3 water reservoirs, completed terracing, and established firebreaks with geotagging of 2,025 trees. External donations: 30 pule trees to East Java Provincial Environment Agency (October-December 2024, 100% completed) and 2,500 mango trees to Pasuruan Regency (January 20, 2025, 100% completed).
Best Practice #8: "Constructing infiltration ponds for groundwater recharge."
PJLH constructed 1,000 rorak units (December 2024, 100% completed) and 3 water reservoirs (Q2-Q4 2025, 100% completed). Proposed eco infiltration well with PT Tirta Investama (Q3-Q4 2026) targeting 80% waterlogging reduction and 100 resident training.
Best Practice #43: "Making biopores."
External evaluation (July-August 2025, 100% completed) monitored 2019-2024 biopore facilities, assessing conditions and maintenance needs.
Best Practice #49: "Developed artificial forest habitat." Conservation area maintains 12,935 trees across 85+ species, including fruit-bearing varieties, providing economic value and biodiversity for water retention.
Sustainability monitoring:
External evaluation (July-August 2025, 100% completed) assessed 100% of 2019-2024 IWRA initiatives, including tree planting, water reservoirs, and biopore facilities, documenting conditions and identifying revitalization needs for sustained flood management and water availability.

3.9.5 *Actions towards achieving best practice related to targets in terms of WASH shall be implemented.* ✔
Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment The site has linked water quality best practices to actions documented in the WSP, targeting surface water quality as a medium priority. Several WASH best practices have been implemented, including:

Best Practice #53: "Provide a sufficient number of sanitizers to employees." Best Practice #54: "Provision of sufficient and high-standard facilities for toilets and washrooms for men, women, and people with disabilities. Best Practice #55: "Provision of clean water facilities."

The site provides adequate sanitation facilities, including bathrooms, hand washing, and shower facilities for all workers. Safe drinking water sourced from a local bottling company with independent laboratory testing confirming compliance with all safe drinking water regulation parameters. Clean water monitoring (Q1-Q2 2025, 100% completed) achieved 100% compliance with Minister of Health Regulation 2 of 2023 through semesterly accredited laboratory testing.

Best Practice #25: "Develop campaigns about sustainable water management." SHARP campaign (Q1-Q4 2025, 100% completed) achieved 99.78% employee accuracy (12,049 correct from 12,075 total responses, exceeding ≥90% target) on environmental management questions through posters, videos, and videotron displays, raising awareness about water conservation and sanitation practices.

Best Practice #56, #57: "Provision of toilets and Clean and Healthy Living Education Program."

On June 17, 2025, a discussion was held with the Regional Development Planning and Research and Development Agency (Bapelitbangda), involving 36 participants who all reached 100% agreement on addressing sanitation for 131 households. Additionally, the PHBS/STBM socialization event on July 18, 2025, successfully engaged 60 participants, with 83% demonstrating understanding of clean and healthy living behaviors and community-based total sanitation practices. Construction of septic tanks is currently underway in Q3-Q4 2025, with 75% progress achieved in building 10 units for households that meet specific criteria, including lacking septic tanks, disposing of waste into rivers, being located within 200 meters of riverbanks, having an underprivileged status, and demonstrating acceptance of the program.

Best Practice #33: "Improving waste management program." Ngadimulyo TPS normalization (July 18, 2025, 100% completed) transported 70% waste to landfill with 100% participants scoring >80 on waste management post-tests, reducing leachate contamination affecting groundwater and river water quality.

Best Practice #74: "Education and sharing regarding water conservation." AWS Stakeholder Forum (August 5, 2025, 100% completed) with 93 participants shared WASH best practices and water stewardship approaches among government, academia, industry, and NGOs for collaborative sanitation improvements in the Kedunglarangan watershed.

Audit Number: AO-001647

Table with 4 columns: ID, Description, Evidence, and Status. Row 1: 4, STEP 4: EVALUATE - Evaluate the site's performance. Row 2: 4.1, 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. Row 3: 4.1.1, Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated. Row 4: Comment, The site has conducted a performance evaluation against the targets set in its water stewardship plan. Row 5: 4.1.2, Value creation resulting from the water stewardship plan shall be evaluated.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment	The site evaluated value creation through a financial cost-benefit analysis in the Management Review on August 22, 2025, documenting concrete economic returns resulting from WSP investments. The value creation includes: Water Efficiency Initiatives - Quantified Financial Returns: - Steam Optimization generated measurable savings: bottom blowdown optimization (investment: \$61,905.06) saved 190,000 kg of steam annually with potential annual savings of \$369.72. - Temperature Control Valve Replacement: With an investment of \$83,656.26, this initiative saved 50,000 kg of steam annually, translating to potential annual savings of \$972.36. - Steam Service Panel Shutoff Valves: An investment of \$17,375.68 yielded combined savings from steam initiatives of \$3,260.10 annually. These measures collectively demonstrate a positive ROI through significant reductions in water consumption (240,000 kg steam/year total), natural gas savings (46,000 Nm³/year), and electricity reductions (2,790 GJ/year). Catchment Conservation - Community Economic Value: - PJLH Program: An initial investment of \$3,499.90 generated an annual economic value of \$184.40 for forest farmer groups, primarily through fruit harvests from 1,051 planted trees in Curah Tangkil. This initiative not only aids in maintaining watershed functions but also provides recurring income for local residents, illustrating a social return on investment beyond mere water savings. Infrastructure Improvements - Preventive Cost Avoidance: - WWTP Diffuser Replacement: With an investment of \$6,086.95, this initiative achieved 100% compliance in wastewater discharge, effectively avoiding potential regulatory penalties and reputational harm associated with non-compliance. - Cooling Tower Optimization: An investment of \$5,682.53 that focuses on identifying 75% of leaks prevents water loss and potential equipment damage through early detection systems. Catchment Sanitation - Pollution Reduction Value: - Septic Tank Construction: An investment of \$3,185.79 for 10 units reduced E.coli levels in river pollution from 131 households, avoiding costs associated with water quality degradation and promoting community health. - Ngadimulyo TPS Normalization: An investment of \$2,464.19 facilitated the transportation of 70% of accumulated waste to the landfill, which helps to prevent groundwater contamination that could incur future remediation costs. - PHBS/STBM Socialization: This initiative, costing \$1,481.55, reached 60 participants with an understanding score of 83%, fostering behavioral changes that reduce long-term pollution management costs.
4.1.3	<i>The shared value benefits in the catchment shall be identified and where applicable, quantified.</i>  Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

Comment The site has identified and quantified the shared value benefits in the Kedunglarangan catchment through four key areas: economic returns, water infrastructure, pollution reduction, and stakeholder engagement. The shared value benefits includes:

Economic Benefits:
The PJLH program generated an annual income of \$184.40 for forest farmer groups from 1,051 trees in Curah Tangkil through fruit harvesting. The waste normalization project at Ngadimulyo TPS created income for community self-help groups (KSM) by adding economic value to sorted waste.

Water Availability Infrastructure:
PJLH constructed 1,000 rorak units, three water reservoirs, 0.5 hectares of terrace fields, and 1,000 meters of firebreaks in Curah Tangkil. These improvements increased groundwater recharge and reduced the risk of downstream flooding. Additionally, the proposed eco-infiltration well with PT Tirta Investama aims to reduce waterlogging by 80%, benefiting 100 residents.

Water Quality Improvements:
The construction of septic tanks for 131 households has significantly reduced E. coli pollution caused by open defecation. Socialization programs on PHBS/STBM reached 60 participants, with 83% demonstrating understanding of proper sanitation practices. At Ngadimulyo TPS, 70% of waste was transported to a landfill, helping to minimize leachate contamination of groundwater and surface water.

Reforestation Impact:
The catchment area has seen the planting of 1,051 trees by PJLH, 30 pule trees by the East Java Provincial Agency, and 2,500 mango trees by Pasuruan Regency, with the involvement of KHDITA, which included 39 participants. On-site maintenance of 12,935 trees provides watershed-wide benefits, such as improved water retention, reduced erosion, increased infiltration, and enhanced air quality and biodiversity.

Stakeholder Engagement:
The AWS Stakeholder Forum engaged 93 participants from government, academia, industry, and NGOs. A discussion with Bapelitbangda involved 36 participants and achieved 100% agreement on collaborative sanitation improvements. External program monitoring evaluated all initiatives from 2019 to 2024, ensuring transparency in shared water governance.

4.2 *Evaluate the impacts of water-related emergency incidents (including extreme events), if any occurred, and determine the effectiveness of corrective and preventative measures.*

4.2.1 *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.*


Yes

Comment There have been no emergency cases for over 5 years, with management reviews conducted once per year. All events are logged in the online plant portal application, which is accessible only to EHS staff. Any emergency response is also discussed during EHS meetings. The site has established accident reporting and emergency response procedures.

4.3 *Evaluate stakeholders' consultation feedback regarding the site's water stewardship performance, including the effectiveness of the site's engagement process.*

4.3.1 *Consultation efforts with stakeholders on the site's water stewardship performance shall be identified.*


Yes

Audit Number: AO-001647

Comment The site publishes an annual sustainability report for relevant stakeholders, which includes information about the implementation of its water stewardship program. The consultation process involved two-way engagement through multiple communication methods such as email, direct communication, virtual meetings, onsite stakeholder forums, and WhatsApp messaging. The report documents feedback from stakeholders, including representatives from government agencies, private companies, NGOs, academic institutions, and local communities.

The consultation generated actionable collaboration proposals aligned with specific AWS outcomes, including IWRA, Good Water Governance, WASH, and Sustainable Water Balance. The site established comprehensive stakeholder communication through email, hardcopy distribution, and multi-channel feedback collection via WhatsApp, Google Forms, and direct communication, engaging organizations across government, utilities, academia, and community sectors.

4.4 Evaluate and update the site's water stewardship plan, incorporating the information obtained from the evaluation process in the context of continual improvement.

4.4.1 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.

Yes

Comment The site's Water Stewardship Plan (WSP) combines lessons learned from internal sustainability evaluations, insights from the AWS annual meeting, and additional external information. The WSP is then modified based on initiatives that can be adopted by the site. The most recent update to the WSP was made on August 25, 2025.

An evaluation of the WSP from 2024 to 2025 showed several modifications. For instance, in 2025, the site significantly increased its investment to over \$200,000, compared to just \$9,088.78 in 2024. This increase reflects feedback from the Management Review regarding the need for a broader economic analysis to create value.

Additionally, the focus shifted from primarily reforestation efforts in 2024 to a more comprehensive approach in 2025 that emphasizes water efficiency, quality compliance, and catchment sanitation. This change demonstrates an adaptive response to the identified shared water challenges.

Furthermore, the WSP now includes quantified performance metrics—such as kilograms of steam saved, percentage of leak reduction, and participant understanding scores—replacing the previous generic activity completion tracking. This allows for outcome-based evaluations in line with the recommendations from the Management Review.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

5	STEP 5: COMMUNICATE & DISCLOSE - Communicate about water stewardship and disclose the site's stewardship efforts	
5.1	<i>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.</i>	
5.1.1	<i>The site's water-related internal governance, including positions of those accountable for compliance with water-related laws and regulations shall be disclosed.</i>	
Comment	The organizational structure of AWS, along with its water governance policies, are documented internally and externally. These documents outline the positions within the company and their corresponding responsibilities regarding water stewardship and compliance with relevant regulations. The public can access reports outlining the company's efforts in these areas on our website's sustainability page. The public can access reports outlining the company's in the website: https://www.sampoerna.com/resources/docs/default-source/sampoerna-market-documents/annual-report-and-sustainability-report-202448e13bc16c7468f696e2ff0400458fff.pdf?sfvrsn=db9553c8_0	
5.2	<i>Communicate the water stewardship plan with relevant stakeholders.</i>	
5.2.1	<i>The water stewardship plan, including how the water stewardship plan contributes to AWS Standard outcomes, shall be communicated to relevant stakeholders.</i>	
Comment	The site discussed the WSP plan during a stakeholder meeting on August 5, 2025, and followed up with an email in August 26, 2025. Communication took place through visits to the stakeholders' offices, as well as emails and messages. Documentation from the meeting is available.	
5.3	<i>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.</i>	
5.3.1	<i>A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a minimum.</i>	
Comment	The site summarized their water management performance on-site, including how they measured up against set targets. This information is available to the public via the company's website, direct message to the relevant stakeholder, and during stakeholder forums and meetings. On the website, the link address can be accessed at this link (page 150 -): https://www.pmi.com/resources/docs/default-source/pmi-sustainability/pmi-integrated-report-2024.pdf?sfvrsn=92e147c8_2	
	Based on the PMI report, the company has disclosed comprehensive quantified water stewardship performance metrics that demonstrate significant progress against established targets. PMI achieved a water intensity ratio of 2.3 cubic meters per million cigarette equivalents in 2024, substantially exceeding their aspiration of ≤3.1 and representing a 4% improvement from the previous year's 2.4 ratio. The company reported total water withdrawal of 3.23 million cubic meters in 2024, while achieving an impressive 31% absolute reduction in water consumption between 2018 - 2024 and a 51% reduction in water intensity versus the 2018 baseline.	
5.4	<i>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.</i>	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

5.4.1	<i>The site's shared water-related challenges and efforts made to address these challenges shall be disclosed.</i>	 Yes
Comment	The site shares water-related challenges and mitigation efforts through the AWS Stakeholder Forum, which documents stakeholder engagement and feedback. At the AWS Stakeholder Forum on August 5, 2025, titled "The Power of Collaboration in Preserving River Water," 93 participants from various sectors, including government, communities, and NGOs, engaged in discussions on water risks. The AWS Report 2025 was sent to relevant stakeholders, with 79 recipients providing feedback via forms. Communication records confirm that the report was received and regulatory information was exchanged. The site's water-related challenges and efforts are as follows: 1. Surface Water Quality: Light pollution due to erosion and waste. Efforts include monthly wastewater monitoring, compliance improvements, online sensor installations, septic tank construction for 10 households (75% complete), and waste normalization, transporting 70% to the landfill. 2. Flood: Issues from deforestation and blocked waterways. Efforts include infrastructure for water retention, tree planting (over 12,935 trees plus additional mango and pule trees), and a proposed eco-infiltration well targeting 80% reduction in waterlogging. 3. Access to Sanitation: 131 households discharge waste into rivers. Efforts involve discussions leading to agreement on solutions, septic tank construction (75% complete), and handwashing campaign stickers in toilets. 4. Water Depletion: Increased residential development, with projected water surplus until 2032. Efforts include maintaining on-site trees, water retention infrastructure, and community awareness campaigns reaching over 1,000 participants. 5. Drought: Declining rainfall and land conversion issues. Efforts mirror those for water depletion, alongside wastewater recirculation initiatives. 6. Flash Flood: Efforts include PJLH water retention infrastructure and tree planting collaborations. 7. Landslides: Efforts include terrace construction, tree planting, and capacity-building discussions. 8. Forest Fire: Efforts involve firebreaks and collaboration to prevent the spread in tree areas. 9. Volcanic Eruption: Efforts include disaster mapping and emergency response plan implementation. The Shared Water Challenge document provides transparency on risk levels, data sources, stakeholder approaches, and specific actions with targets. The 79 feedback forms indicate effective disclosure and awareness of water stewardship.	
5.4.2	<i>Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified.</i>	 Yes
Comment	The site has proactively engaged with both internal and external stakeholders using a variety of communication methods, including emails, social media, video posters, virtual meetings, and in-person meetings. All this communication is recorded and kept.	
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	No water-related compliance violations or corrective measures to report.	
5.5.2	<i>Necessary corrective actions taken by the site to prevent future occurrences shall be disclosed if applicable.</i>	 Yes
Comment	There have been no water-related compliance violations and no associated corrections required.	

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001647

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	There have been no water-related compliance violations and no associated corrections required.	

Previous Findings

	<i>All non-conformities raised in the previous audit have been satisfactorily closed.</i>	 Yes
Comment	All non-conformities already closed	