vedanta aluminium

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VAML/MoEF&CC/006/2026-02
May 28, 2026

To,
Deputy Director General of Forests (C),
Ministry of Environment, Forest and Climate Change,
Integrated Regional Office,
A/3, Chandersekharpur,
Bhubaneswar, Odisha – 751023

Sub: Submission of Half-Yearly Compliance Report of 2400 MW Thermal Power Plant of M/s. Vedanta Aluminium Metal Limited, Jharsuguda for the period from October 2025 to March 2026

Ref: 1. Environment Clearance letter No. J-13011/3/2007-IA. II (T) dated 7th December, 2007
2. Amended Environment Clearance letter No. J- 13011/3/2007-IA. II (T) dated 12th May, 2008
3. Amended Environment Clearance letter no. J-13011/3/2007-IA. II(T) dated 16th October,2018

Dear Sir,

This has reference to the above subject, cited reference and as per the provision of Environment Clearance and EIA notification 2006, we are herewith submitting the half-yearly compliance status for the conditions of Environment Clearance and its amendments for 2400 MW Thermal Power Plant.

We would like to draw your attention towards the fact that we are facing problem during uploading of half-yearly compliance report at Parivesh 2.0 Portal. Moreover, we are also facing problem in raising the ticket on Parivesh 2.0 Portal for the above issue (screenshot enclosed). We will upload the documents as soon as the issue will be resolved. In order to meet the stipulated timeline of submission, we are hereby submitting the half-yearly compliance reports via email and hardcopies of the Annexures will be submitted due to constraints of size of files.

Further, as already intimated and submitted that we have already applied EC transfer application from M/s. Vedanta Limited to M/s. Vedanta Aluminium Metal Limited.

Thanking You,

Yours Faithfully,
For M/s. Vedanta Aluminium Metal Limited, Jharsuguda

Dr. Amit Kumar Tyagi
Head- Environment

Copy to: 1. The Director, I.A. Division, Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi – 110003
2. The Member Secretary, Central Pollution Control Board, "Paribesh Bhawan", CBD-Cum Office Complex, East Arjun Nagar, New Delhi-110032
3. The Member Secretary, State Pollution Control Board, Odisha, Bhubaneswar

Enclosures: As above

GOVT. OF INDIA
MoEF & CC Integrated R.O.
Bhubaneswar-751023
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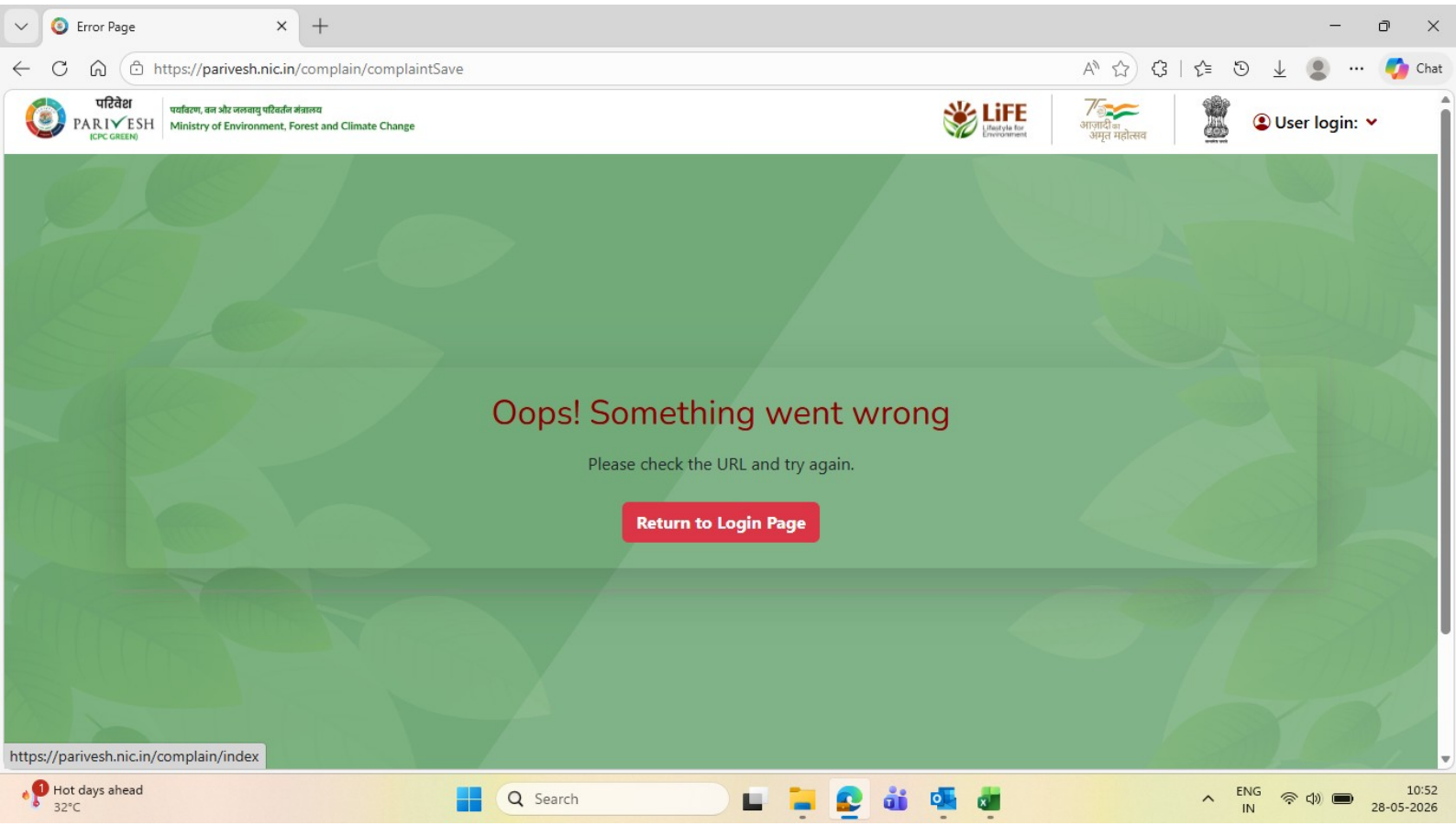
T: +91-664 566 6000 | F: +91-664 566 6267 | Website: www.vedantaaluminium.com

REGISTERED OFFICE: Vedanta Aluminium Metal Limited, C-103, Atul Projects, Corporate Avenue New Link, Chakala MIDC, Mumbai, Maharashtra, India, 400093
CIN: U24202MH2023PLC411663 | Email: vaml.sect@vedanta.co.in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Ministry of Environment, Forest and Climate Change
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M/s. Vedanta Aluminium Metal Limited, Jharsuguda
Thermal Power Plant (2400 MW)
Compliance Status on Environmental Clearance - MoEF Letter No. J-13011/3/2007-IA-II (T) dated 7th December 2007 and amended Environment Clearance letter No. J- 13011/3/2007-IA. II (T) dated 12th May, 2008 and Amended Environment Clearance Conditions vide letter No. J- 13011/3/2007 IA.II (T) dated 16th October, 2018

Sl.No.	CONDITIONS	COMPLIANCE STATUS
Environmental Clearance- Letter No. J-13011/3/2007-IA-II (T) dated 7th December 2007		
SPECIFIC CONDITIONS		
1.	General Comment	-
2.	General Comment	-
3. (i)	The total land requirement shall not exceed 839.50 acres for all the activities/ facilities of the power project.	The facilities of the power project have been set up within 839.50 acres.
(ii)	Ash and sulphur contents in the coal to be used in the project shall not exceed 41.6% and 0.5% respectively.	With respect to this point, please note that there has been a MoEFCC notification S.O. 1561(E) dated 21.05.2020 and subsequent amendments that substituted Rule 3(8) of the Environment (Protection) Rules, 1986 and stated that the TPPs can use coal without any stipulations as to ash content or distance subject to fulfilment of certain conditions. Such conditions include technology solution for emission norms, management of ash pond, safe transportation among others. It is submitted that such conditions are being complied with in letter and spirit. From Oct-25 to Mar-26, the average ash in the coal is 40.82 percent and sulphur contents in the coal ranges 0.39 - 0.41 percent, respectively. **Notification and Analysis report for period of Oct-25 to Mar-26 is enclosed as Annexure-1a and 1b.**
(iii)	Two bi-flue stack of 275 m height each with exit velocity of not less than 25 m/s shall be provided with continuous online monitoring system.	Two bi-flue stacks of 275 m height each with exit velocity of not less than 25 m/s have been provided with continuous online monitoring system.
(iv)	High efficiency Electrostatic Precipitators (ESPs) with efficiency not less than 99.98% shall be installed so as to ensure that particulate emissions do not exceed 50 mg/Nm^3.	Electrostatic Precipitators (ESPs) with 99.98 percent efficiency followed by bag filters (hybrid ESP) have been installed and the particulate emissions is within 50 mg/Nm^3. **Monitoring Report for the period of Oct-25 to Mar-26 enclosed as Annexure-2.**
(v)	Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit of requisite efficiency of removal of SO_2, if required at a later stage.	As per the notification G.S.R. 465(E). dated 11th July 2025, the FGD system for Sulphur dioxide emission standards shall not be applicable to all Category C thermal power plants subject to ensuring compliance of stack height criteria. As per the criteria mentioned in the notification, we have been falling under category C and are compliant of stack height criteria since inception. So, this condition is not applicable for our Industry. **Notification enclosed as Annexure-3**
(vi)	Water requirement shall not exceed 5235 m^3/hr. No ground water shall be	Water requirement is within 5235 m^3/hr and from Oct-25 to Mar-26, the water consumption in TPP is in the range of 3144

	extracted for the project at any stage.	to 4031 m^3/hr and no ground water is being used for the project. **Specific Water consumption report enclosed as Annexure-4.**
(vii)	Closed Circuit Cooling system with cooling towers shall be provided.	Closed Circuit Cooling system with cooling towers (NDCT) have been provided and an optimum level of COC being maintained during the plant operation. For each unit, one no. of cooling tower of 150 meters height has been provided.
(viii)	For controlling fugitive dust, regular sprinkling of water in the coal handling area and other vulnerable areas of the plant shall be ensured.	Fixed water sprinkling system/Fixed Mist type cannon have been provided all along the coal storage area. Further, Mobile Water tankers/sprinklers have also been deployed round the clock in CHP, ash pond area to arrest airborne emissions. **Photos enclosed as Annexure-5.**
(ix)	The project authorities should adhere to the provisions stipulated in the fly ash notification of September, 1999 and as amended in August, 2003 in regard to fly ash utilization.	Fly ash is being collected in dry form in silos of capacity-10000 m^3. Ash is being utilized in cement, brick manufacturing, road and infrastructure activities, reclamation of low-lying areas and the balance is disposed off to the ash pond in the form of High Concentration Slurry disposal. As per MoEFCC Fly ash amendment notification dated 30th December 2022, we have declared our all ash ponds and dykes are operational in nature. The communication letter sent to the OSPCB and CPCB office vide letter no VL/AU/22-23/117/OPCB dated 30th March 2023. **Letter enclosed as Annexure-6a.** As per Fly ash notification 2021 and its subsequent amendments, more than 100 percent ash was utilized in FY 2026. Moreover, continuous efforts have been made to utilize fly ash in different sustainable avenues as per enclosed plan for 100 percent Fly ash utilization/disposal in close coordination with the statutory bodies. **Ash Utilization Plan of FY-26 and request letters are enclosed as Annexure-6b and Annexure-6c respectively.**
(x)	The ash pond shall be lined with impervious lining to avoid any leaching into groundwater. The ash dyke shall be so designed and strengthened to ensure guard against breaching. Adequate safety measures shall also be taken so that pond ash does not become air borne to cause air pollution in the surrounding areas.	The ash ponds/dykes are constructed/ designed as per the recommendations given in design document. The ash is being transported through High concentration slurry disposal system. Water in the slurry is minimum thereby making the entire mass a rock like structure so that no water is available for leaching into ground and the ash will not get airborne. This method of disposal is such that there will be no pressure on the bunds, making it vulnerable for a breach. Further, proper design of the dyke through reputed consulting firm/institution, appropriate remediation for breach management and communication process followed in case of eventuality. The ash pond has been lined with impervious clay/ HDPE lining to avoid any leaching into ground water. Moreover, piezometric wells have been installed to check the level of water. Further, mobile tankers/ fixed sprinkling system has been provided to arrest the airborne emission if any. **Photos of water sprinkling measures enclosed as Annexure-7.**
(xi)	Project proponent shall commission a study to be	We had approached Wildlife Institute of India, Dehradun to take up the study but they refused to undertake the study, the same

	undertaken by Wildlife Institute of India, Dehradun to determine the quantum and scale of mitigation measures to offset the impact, if any, on the safety of the elephants and security of their migration areas. The study would have to be completed before starting work at site and the safeguards so suggested shall be implemented by the project. The requisite allocation of funds for the same shall be built into the project cost.	was communicated to the Ministry. Based on the committees recommendation the condition was amended to undertake the study through Centre for Ecological Sciences, Indian Institute of Science, Bangalore. The same was communicated to us vide letter No.J- 13011/3/2007-IA.II (T) dated 12th May 2008 and the compliance status of the condition is mentioned in the amended condition 3 (xi). The study has been completed, and the report has been submitted to Director, Project Elephant, MoEFCC, CWLW and PCCF, Govt. of Odisha for necessary vetting. The conclusion of the study is detailed in Chapter 5, Pg.27 and reads as We therefore do not recommend the establishment of any corridor through this virtually nonexistent (or non-viable) habitat in the Sambalpur North Forest Division. We strongly recommend that the overall viability of the Sambalpur Elephant Reserve is strengthened in the Sambalpur South Forest Division. **Report enclosed as Annexure-8a.** The Principal Chief Conservator of Forests, (Wildlife) and Chief Wildlife Warden, Odisha has approved the site-specific wildlife conservation plan on 30.04.2021 with a financial forecast of Rs. 610.894 lakhs to be spent for implementation by the Forest Department (Both Jharsuguda and Sambalpur Forest Division) for this plan. Accordingly, as per the demand raised by the Divisional Forest Officer, Jharsuguda, an amount of Rs. 530.904 lakhs have been deposited on 17.05.2021 towards implementation of the above-mentioned plan over a period of 10 years. The plan is under implementation by Forest Department. Moreover, the recommendations given in the wildlife management plan to be executed by Vedanta Ltd have been completed except compliance of condition for providing the software for WL-Anukampa and its maintenance. We are continuously taking follow-up with the DFO office for the implementation status and way forward to comply the WL-Anukampa and its maintenance condition. **Latest communication and implementation status are enclosed as Annexure-8b.**
(xii)	The District Collector / Revenue Divisional Commissioner shall be informed regarding R&R and all other benefits to be provided by the project proponent and their effective implementation shall have to be overseen by the District Authorities.	The R and R package has been finalized based on the R and R Policy of Odisha incorporating the local additional requirement discussed in the RPDAC meeting chaired by the Revenue Divisional Commissioner and attended by the District Collector and representatives of the affected villagers. The District Collector/District Magistrate and the Administration is overseeing to ensure strict compliance of the commitment. **Status Report enclosed as Annexure-9.**
(xiii)	All the measures suggested by the Wildlife Department, Govt. of Orissa (Chief Wildlife	The Principal Chief Conservator of Forests, (Wildlife) and Chief Wildlife Warden, Odisha has approved the site-specific wildlife conservation plan on 30.04.2021 with a financial forecast of Rs. 610.894 lakhs to be spent for implementation by

	Warden) for this project as contained in their letter no. IWL(c)-FC-370/07/6532 dated 16.10.2007 and any other measure as may be considered necessary for the conservation of wildlife in the area shall be taken up on priority before commissioning the project.	the Forest Department (Both Jharsuguda and Sambalpur Forest Division) for this plan. Accordingly, as per the demand raised by the Divisional Forest Officer, Jharsuguda, an amount of Rs. 530.904 lakhs have been deposited on 17.05.2021 towards implementation of the above-mentioned plan over a period of 10 years. The plan is under implementation by Forest Department. Moreover, the recommendations given in the wildlife management plan to be executed by Vedanta Ltd have been completed except compliance of condition for providing the software for WL-Anukampa and its maintenance. We are continuously taking follow-up with the DFO office for the implementation status and way forward to comply the WL-Anukampa and its maintenance condition. **Latest communication and implementation status are enclosed as Annexure-8b.**
(xiv)	Rainwater harvesting should be adopted. Central Groundwater Authority / Board shall be consulted for finalization of appropriate rain water harvesting technology within a period of three months from the date of clearance	As per CGWA guidelines September 2020, the industries falling under hazardous category should not implement any recharge measures within the plant premises. Hence, we have carried out roof top rainwater harvesting structures at our site to utilize the collected/harvested water. **CGWA guidelines enclosed as Annexure-10a.** We have installed 7 nos. of roof top rainwater harvesting structure with a total capacity of more than 10000 m3 of rainwater for reuse. The details of all rainwater harvesting measures adopted in our complex has been submitted to CGWA vide letter no VL/CGWB/003/2024-01 dated August 05, 2024. **Letter enclosed as Annexure-10b.** Moreover, we have completed cleaning and restoration of various community ponds thereby augmenting the capacity for rainwater harvesting in the surrounding villages. **Photos of few ponds are enclosed as Annexure-10c.**
(xv)	Wastewater generated shall be recycled and reused in the plant premises. There shall be no discharge of wastewater outside the plant boundary except during monsoon. Treated effluents conforming to the prescribed standards shall be discharged during the monsoon period	Effluent treatment Plant along with Reverse Osmosis Plant has been installed and is under operation. Being a responsible corporate, we are maintaining the ZLD and all treated effluent after conforming to standards is recycled and reused within the plant. **Monitoring Report for the period of Oct-25 to Mar-26 enclosed as Annexure-2.**
(xvi)	Regular monitoring of ground water quality including heavy metals shall be undertaken around ash dyke and the	Apart from the piezometric bore wells around ash ponds, the ground water monitoring has been undertaken in the surrounding villages like Purna, Siriapali, Badmal, Bhurkamunda and Katikela. **Monitoring Report for the period of Oct-25 to Mar-26 enclosed as Annexure-2.**

	project area to ascertain the change, if any, in the water quality due to leaching of contaminants from ash disposal area.	
(xvii)	A greenbelt shall be developed all along the plant and ash pond boundary covering a total area of 322 acres.	33 percent green belt has been developed all along the plant and ash pond area. High potential local species has been planted to attenuate the pollutants as per the CPCB guidelines. Moreover, as a responsible corporate, we have taken up plantation activities in Jharsuguda at various locations. **Green Belt Photos are enclosed as Annexure-11a.** We have taken up a mass plantation drive outside plant premises in an area of approx. 50 acres with 1 lakh saplings under MoEFCC drive-Ek Ped Maa Ke Naam. **Letter enclosed as Annexure-11b.**
(xviii)	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Complied. First aid and sanitation facilities had been provided to all the drivers and contract workers during the construction phase. Moreover, company has established dedicated First Aid center and Apollo Clinic to cater the employees and workers throughout the year.
(xix)	Leq of Noise level should be limited to 75 dB(A) and regular maintenance of equipment be undertaken. For people working in the high noise areas, personal protection devices should be provided.	Mitigative measures have been provided in high noise level areas like Turbine and Generator to ensure the Leq of noise level less than 75 dB(A) with regular maintenance of equipment. **Monitoring Report for the period of Oct-25 to Mar-26 enclosed as Annexure-2.**
(xx)	Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Quarterly reports shall be submitted to the Regional Office of this Ministry.	We are submitting monitoring reports monthly to OSPCB and quarterly reports are being regularly submitted to the Regional Office of Ministry. **Monitoring Report for the period of Oct-25 to Mar-26 enclosed as Annexure-2.** AAQ stations have been fixed in consultation with OSPCB in and around the power plant complex. We had already submitted an application/letter to OSPCB regarding precise location of the AAQMS on dated 22.04.2024, 08.07.2024 and 25.07.2024 along with a report Air Dispersion Modelling for Power and Aluminum Plant, Bhurkamunda, Jharsuguda - to Check the Efficacy of the Existing Ambient Air Quality Network (manual and CAAQMS) by Professor Mukesh Sharma, IIT Kanpur. **Consultation letter enclosed as Annexure-12.**
(xxi)	The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which should be in the	Advertisement with information on grant of EC as advised by the Ministry has been released in two local newspapers one in vernacular - The Samaja (Oriya News Paper) dated 17.12.2007 and one in English - The Times of India (English News Paper) dated 17.12.2007. **Advertisements published in the newspapers are enclosed as Annexure-13.**

	vernacular language of the locality concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee and may also be seen in the Website of the Ministry of Environment and Forests in the http://envfor.nic.in	
(xxii)	A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.	A separate Environment Management Cell with qualified personnel has been set up to monitor compliance of the conditions stipulated. **Organogram enclosed as Annexure-14.**
(xxiii)	Half yearly report on the status of implementation of the conditions and environmental safeguards should be submitted to this Ministry, the Regional Office, CPCB and SPCB.	We are submitting the half yearly compliance report and the monitoring data with statistical interpretation along with supporting annexures in the MoEFCC Parivesh Portal and to the regional office of MoEF&CC, CPCB, OSPCB as well as on our website and link of the same is as below. https://vedantaaluminium.com/sustainability/compliance-report-jharsuguda
(xxiv)	Regional Office of the Ministry of Environment & Forests located at Bhubaneswar will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report, Environment Management Plan and the additional information / clarifications submitted subsequently should be forwarded to the	Details implementation status of Environment Management Plan is enclosed as **Annexure-15.**

	Regional Office for their use during monitoring.	
(xxv)	Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. These cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	Separate funds have been allocated for implementation of the Environmental Protection measures and will not be diverted for any other purposes. **Expenditure details are enclosed as Annexure-16.**
(xxvi)	Full cooperation should be extended to the Scientists/Officers from the Ministry and its Regional Office at Bhubaneswar/ the CPCB / the SPCB during monitoring of the project.	We shall extend full co-operation to the scientists/ officers from the Ministry/ Regional Office/ CPCB and OSPCB who would be monitoring the compliance of Environmental status.
4.	The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.	We will strictly adhere to the stipulations of the Ministry.
5.	The environmental clearance accorded shall be valid for a period of 5 years to the start of production operations by the power plant.	Noted.
6.	In case of any deviation or alteration in the project proposed from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to incorporate additional environmental	No deviation, alteration, expansion or modernization in the project will be undertaken without prior approval of the Ministry.

	protection measures required, if any.	
7.	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.	Noted.
Amended Environment Clearance Conditions vide letter No. J- 13011/3/2007-IA.II(T) dated 12th May, 2008		
1.	General Comment	-
2.	General Comment	-
3(xi)	**Amended Condition:** "Project proponent shall commission a study to be undertaken by the Centre for Ecological Sciences, Indian Institute of Science, Bangalore regarding the feasibility of developing viable elephant corridors, which may have minimal impact due to the proposed project. The report shall be get vetted by Chief Wildlife Warden, Govt. of Orissa and Director (Project Elephant), Govt. of India. The necessary mitigation measures as may be suggested based on the proposed study shall be implemented by the project proponent along with the State Wildlife Department. The said	We had approached Wildlife Institute of India, Dehradun to take up the study but they refused to undertake the study, the same was communicated to the Ministry. Based on the committees recommendation the condition was amended to undertake the study through Centre for Ecological Sciences, Indian Institute of Science, Bangalore. The same was communicated to us vide letter No.J- 13011/3/2007-IA.II (T) dated 12th May 2008 and the compliance status of the condition is mentioned in the amended condition 3 (xi). The study has been completed, and the report has been submitted to Director, Project Elephant, MoEFCC, CWLW and PCCF, Govt. of Odisha for necessary vetting. The conclusion of the study is detailed in Chapter 5, Pg.27 and reads as We therefore do not recommend the establishment of any corridor through this virtually nonexistent (or non-viable) habitat in the Sambalpur North Forest Division. We strongly recommend that the overall viability of the Sambalpur Elephant Reserve is strengthened in the Sambalpur South Forest Division. **Study Report enclosed report as Annexure-8a.** The Principal Chief Conservator of Forests, (Wildlife) and Chief Wildlife Warden, Odisha has approved the site-specific wildlife conservation plan on 30.04.2021 with a financial forecast of Rs. 610.894 lakhs to be spent for implementation by the Forest Department (Both Jharsuguda and Sambalpur Forest Division) for this plan. Accordingly, as per the demand raised by the Divisional Forest Officer, Jharsuguda, an amount of Rs. 530.904 lakhs have been deposited on 17.05.2021 towards

	study should be completed before commissioning of the plant. The implementation of the EMP shall be periodically monitored by a team comprising of Representatives from (i) Indian Institute of Science, Bangalore, (ii) Regional Office of the Ministry at Bhubaneswar and (iii) State Wildlife Department".	implementation of the above-mentioned plan over a period of 10 years. The plan is under implementation by Forest Department. Moreover, the recommendations given in the wildlife management plan to be executed by Vedanta Ltd have been completed except compliance of condition for providing the software for WL-Anukampa and its maintenance. We are continuously taking follow-up with the DFO office for the implementation status and way forward to comply the WL-Anukampa and its maintenance condition. **Latest communication and implementation status are enclosed as Annexure-8b.**
Additional Conditions		
(i)	The site at Sripura village shall only be used for ash disposal for both the phases. Out of the 790 acres of available land, the proponent should carve out 757.3 acres of land as required for the ash pond such that the land so carved out is far away as possible from the river.	Ash ponds at Katikela, Kurebaga and Siriapali have already been developed and are in operation. The ash pond site at Sripura was envisaged along with expansion of power plant which has not been established/constructed for the business decision. The ash pond will be constructed if required as per the amendment of EC No. J- 13011/3/2007-IA.II (T) dated 16th October, 2018 at the permitted sites.
(ii)	The earlier site for the ash pond, which was close to the elephant corridor, shall be abandoned and no activity relating to the power project in any form shall be taken on that site.	The ash pond will be constructed if required as per the amendment of EC No. J- 13011/3/2007-IA. II (T) dated 16th October 2018 at the permitted sites.
Amended Environment Clearance Conditions vide letter No. J- 13011/3/2007-IA.II (T) dated 16th October, 2018		
1.	General Comment	-
2.	General Comment	-
3.	General Comment	-
4.	General Comment	-
5(i)	**Amended Condition:** Ash ponds at village Siriapali in an area of 230 acres and at village Gudigaon in an area of 191.92 ha is permitted.	Noted.

(ii)	Ash pond expansion at Katikela is not permitted and the said area shall be developed as greenbelt.	As per EC amendment dated 16.10.2018 condition we have not carried out any expansion in Katikela ash pond area. Katikela lagoon 2 has been reclaimed, and plantation has also been carried out. **Photos of plantation are enclosed as Annexure-17.**
(iii)	Remediation plan for restoration of Katikela Ash pond near Bhedan river prepared by M/s Tata Consulting Engineers shall be implemented.	Details of activities carried out during the restoration and reclamation work at Katikela lagoon 2 as per TCE recommendation. **Status enclosed as Annexure-18.**
6 (i)	The protection of elephants moving in the area to be ensured along with ensuring safe passage/corridor for the movement of elephants from one habitat to other safely.	The Principal Chief Conservator of Forests, (Wildlife) and Chief Wildlife Warden, Odisha has approved the site-specific wildlife conservation plan on 30.04.2021 with a financial forecast of Rs. 610.894 lakhs to be spent for implementation by the Forest Department (Both Jharsuguda and Sambalpur Forest Division) for this plan. Accordingly, as per the demand raised by the Divisional Forest Officer, Jharsuguda, an amount of Rs. 530.904 lakhs have been deposited on 17.05.2021 towards implementation of the above-mentioned plan over a period of 10 years. The plan is under implementation by Forest Department. Moreover, the recommendations given in the wildlife management plan to be executed by Vedanta Ltd have been completed except compliance of condition for providing the software for WL-Anukampa and its maintenance. We are continuously taking follow-up with the DFO office for the implementation status and way forward to comply the WL-Anukampa and its maintenance condition. **Latest communication and implementation status are enclosed as Annexure-8b.**
(ii)	All the protection and conservation activities to be undertaken as per the directions and recommendation of the Chief Wildlife Warden, Odisha and the local officials.	**Latest communication and implementation status are enclosed as Annexure-8b.**

Sl.No.	Terms and Conditions	Status
a.	Details regarding change in source (location of the source, proposed quantity, distance from the power plant and mode of transportation), quality (Ash, Sulphur, Moisture content and Calorific value) shall be informed to the Ministry and its concerned Regional Office. The quantity of coal transported from each source along with the mode of transportation shall be submitted as part of EC Compliance Report. 1. Domestic to Domestic 2. from domestic to domestic (blended with imported coal up to 30% content of imported coal) 3. from imported to imported (blended with domestic coal up to 10% content of domestic coal) 4. from imported to domestic (where the GCV of the domestic coal is of the same grade as of imported coal).	We have procured the coal from the below domestic sources: Source - MCL, NLC, OCPL, and Captive Mine (Jamkhani). Coal Quality details - GCV (Kcal/kg) ARB - Approx 2800 to Approx 3400 Ash - 40 percent to 50 percent Sulphur Content - 0.34 percent to 0.55 percent Total Moisture -11.73 percent to 13.51 percent
b.	The applicable fluc gas emissions standards for Particulate Matter, Sulphur Dioxide, Oxides of Nitrogen and Mercury shall be complied in line with Ministry's Notification vide S.O. 3305(E) dated 7.12.2015 and subsequent emissions. A progress of implementation and its compliance shall be submitted as part of Compliance Report.	As per the notification G.S.R. 465(E). dated 11th July 2025, the Sulphur dioxide emission standards shall not be applicable to all C Category thermal power plants subject to ensuring compliance of stack height criteria. As per the criteria mentioned in the notification, we are falling under category C and stack height of our powerplants is 275m since the inception of plant. So SO_2 standard has not applicable to our plant. **Notification enclosed as Annexure-3.** The applicable flue gas emission standards like PM, SO_2, NO_X and Hg is being monitored regularly. **Monitoring Report for the period of Oct-24 to Nov-25 enclosed as Annexure-2.**
c.	Ash content in the Coal and Coal transportation is governed by the Ministry's Notification vide S.O. 1561 (E) dated 21.5.2020. As far as possible, Coal transportation shall be done by rail/ conveyor or other eco-friendly modes. However, road transportation is allowed with tarpaulin covered trucks till the railway/ conveyor belt infrastructure is made available. A progress (Physical and financial) of rail connectivity from nearest railway siding or conveyor connectivity to the power plant hall be submitted in the EC compliance report.	Mode of transportation of coal is rail and road with proper mitigative measures. In addition to that we have provided railway infrastructure inside plant premises for unloading of coal with proper mitigative measures.
d.	Additional ash pond shall not be permitted on account of increase in ash content in the raw coal as due to change in coal source including lignite other than	Noted. As per Fly ash notification 2021 and its subsequent amendments, more than 100 percent ash was utilized in FY 2026. Moreover, continuous efforts have been made to utilize fly

	the ash pond permitted and specified in the Prior Environmental Clearance. 100% fly ash utilisation is to be achieved within 4 years in accordance with the extant provisions laid down in the Fly ash notifications dated 14.09.1999, 27.08.2003, 3.11.2009 & 25.01.2016, 31.12.2021 and 30.12.2022 as amended from time to time.	ash in different sustainable avenues as per enclosed plan for 100 percent Fly ash utilization/disposal in close coordination with the statutory bodies. **Ash Utilization Plan of FY-26 and request letters are enclosed as Annexure-6b and Annexure-6c respectively.**
e.	In case of exceptional circumstances, project proponents may approach the Ministry for seeking permission to use an emergency ash pond with cogent reasons, if any.	Noted.
f.	The details regarding monthly generation, utilisation and disposal of fly ash (including bottom ash) shall be submitted to the Ministry and its Regional Office.	Monthly fly ash utilization report has been uploaded in CPCB portal.

Ref: **Envlab/26-27/TR-02944** ***Date: 07.05.2026***

VEDANTA LIMITED, JHARSUGUDA
THERMAL POWER PLANT (2400 MW)
Half Yearly Environment Quality Report
(Oct 2025 – Mar 2026)

1. Stack Emission:

i. Particulate Matter (mg/Nm^3)

Stack Description	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
TPP - Unit 1	50	45.6	44.4	42.6	42.0	42.6	41.9	41.9	45.6	43.2
TPP - Unit 2	50	43.8	41.9	41.2	40.8	43.7	44.2	40.8	44.2	42.6
TPP - Unit 3	50	45.4	45.2	46.1	45.9	45.0	45.5	45.0	46.1	45.5
TPP - Unit 4	50	43.2	42.6	43.4	44.8	43.9	44.6	42.6	44.8	43.8

ii. SO2 (mg/Nm^3)

Stack Description	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
TPP - Unit 1	1339	1328	1344	1358	1345	1358	1328	1358	1345
TPP - Unit 2	1315	1306	1312	1306	1312	1320	1306	1320	1312
TPP - Unit 3	1345	1342	1349	1334	1328	1336	1328	1349	1339
TPP - Unit 4	1321	1316	1320	1315	1322	1345	1315	1345	1323

iii. NOx (mg/Nm^3)

Stack Description	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
TPP - Unit 1	450	352	348	342	351	344	350	342	352	348
TPP - Unit 2	450	339	345	340	336	325	336	325	345	337
TPP - Unit 3	450	335	330	331	325	310	318	310	335	325
TPP - Unit 4	450	358	364	358	360	354	345	345	364	357

iv. Mercury (mg/Nm^3)

Stack Description	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
TPP - Unit 1	0.03	0.0081	0.0078	0.0076	0.0078	0.0075	0.0078	0.0075	0.0081	0.0078
TPP - Unit 2	0.03	0.0074	0.0075	0.0072	0.0075	0.0078	0.0072	0.0072	0.0078	0.0074
TPP - Unit 3	0.03	0.0079	0.0082	0.0077	0.0071	0.0076	0.0075	0.0071	0.0082	0.0077
TPP - Unit 4	0.03	0.0071	0.0075	0.0074	0.0075	0.0075	0.0074	0.0071	0.0075	0.0074

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02945** ***Date: 07.05.2026***

2. Ambient Air Quality:

i. PM_{10} ($\mu g/m^3$)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (24 Hours)		**100**								
1	Vedanta Township	56.7	55.8	56.2	58.3	58.7	60.3	55.8	60.3	57.7
2	Near Gate No-1	64.1	63.8	64.2	64.6	64.7	65.3	63.8	65.3	64.5
3	Near WTP Clarifier	62.3	63.2	62.1	63.6	63.8	63.5	62.1	63.8	63.1
4	Administrative Office Top	59.7	58.9	58.9	60.2	60.5	60.3	58.9	60.5	59.8
5	In front of Cooling Tower-III	60.5	60.4	61.7	62.6	63.1	63.4	60.4	63.4	62.0
6	Near IPP Office	60.5	60.1	60.0	61.4	63.1	62.3	60.0	63.1	61.2
7	Near CHP ETP building	61.6	62.1	62.7	63.2	63.7	64.5	61.6	64.5	63.0
8	Kurebaga Ash Pond	60.2	62.1	62.0	63.5	63.9	64.4	60.2	64.4	62.7
9	Siriapali Ash Pond	59.9	61.0	61.5	62.3	62.8	61.4	59.9	62.8	61.5
10	Katikela Ash Pond	59.9	59.2	59.3	61.3	62.0	61.9	59.2	62.0	60.6

ii. $PM_{2.5}$ ($\mu g/m^3$)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (24 Hours)		**80**								
1	Vedanta Township	28.7	28.1	28.2	29.4	29.7	30.4	28.1	30.4	29.1
2	Near Gate No-1	32.4	32.1	32.3	32.4	32.6	32.9	32.1	32.9	32.5
3	Near WTP Clarifier	31.6	31.9	31.1	32.2	32.3	32.1	31.1	32.3	31.9
4	Administrative Office Top	30.2	29.7	29.3	30.4	30.6	30.4	29.3	30.6	30.1
5	In front of Cooling Tower-III	30.5	30.6	31.2	31.6	31.8	32.0	30.5	32.0	31.3
6	Near IPP Office	30.5	30.2	30.4	31.0	31.9	31.4	30.2	31.9	30.9
7	Near CHP ETP building	31.0	32.4	31.6	31.9	32.1	32.6	31.0	32.6	31.9
8	Kurebaga Ash Pond	30.4	31.4	29.9	32.1	32.2	32.5	29.9	32.5	31.4
9	Siriapali Ash Pond	30.2	30.8	31.0	31.4	31.6	31.7	30.2	31.7	31.1
10	Katikela Ash Pond	30.3	29.8	30.4	31.0	31.2	31.1	29.8	31.2	30.6

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02946** ***Date: 07.05.2026***

iii. SO_2 (µg/m^3)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (24 Hours)		**80**								
1	Vedanta Township	18.5	18.8	19.0	19.3	19.6	19.9	18.5	19.9	19.2
2	Near Gate No-1	17.5	17.4	17.7	18.8	18.9	18.7	17.4	18.9	18.2
3	Near WTP Clarifier	15.5	15.4	15.1	16.2	17.1	17.3	15.1	17.3	16.1
4	Administrative Office Top	16.6	16.9	16.3	17.9	17.5	16.6	16.3	17.9	17.0
5	In front of Cooling Tower-III	15.9	15.5	15.8	16.0	16.3	16.5	15.5	16.5	16.0
6	Near IPP Office	18.8	19.0	20.2	21.1	21.4	22.2	18.8	22.2	20.5
7	Near CHP ETP building	16.8	18.4	18.5	18.8	19.9	20.0	16.8	20.0	18.7
8	Kurebaga Ash Pond	22.9	23.0	23.3	23.7	23.4	22.9	22.9	23.7	23.2
9	Siriapali Ash Pond	22.3	22.6	22.9	23.4	23.5	23.7	22.3	23.7	23.1
10	Katikela Ash Pond	21.8	21.5	22.0	22.2	22.2	22.5	21.5	22.5	22.0

iv. NO_2 (µg/m^3)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (24 Hours)		**80**								
1	Vedanta Township	22.7	23.3	23.1	23.4	22.9	23.5	22.7	23.5	23.2
2	Near Gate No-1	24.1	24.0	24.4	25.0	24.7	25.1	24.0	25.1	24.6
3	Near WTP Clarifier	23.0	23.4	23.1	23.0	22.9	23.4	22.9	23.4	23.1
4	Administrative Office Top	22.9	23.5	23.7	24.0	23.7	24.5	22.9	24.5	23.7
5	In front of Cooling Tower-III	21.4	22.4	23.2	24.4	24.6	24.9	21.4	24.9	23.5
6	Near IPP Office	22.4	21.6	22.2	22.6	22.4	23.1	21.6	23.1	22.4
7	Near CHP ETP building	22.7	22.8	22.5	23.9	24.5	23.7	22.5	24.5	23.4
8	Kurebaga Ash Pond	25.4	25.3	26.5	27.4	27.2	26.9	25.3	27.4	26.5
9	Siriapali Ash Pond	25.7	26.1	26.6	26.5	26.7	27.0	25.7	27.0	26.4
10	Katikela Ash Pond	25.6	25.6	25.9	26.3	26.9	26.6	25.6	26.9	26.2

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Reviewed By

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Approved By

Ref: **Envlab/26-27/TR-02947** ***Date: 07.05.2026***

v. CO (mg/m^3)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (08 Hours)		**2.0**								
1	Vedanta Township	0.45	0.44	0.45	0.47	0.46	0.44	0.44	0.47	0.45
2	Near Gate No-1	0.61	0.60	0.61	0.62	0.63	0.62	0.60	0.63	0.62
3	Near WTP Clarifier	0.56	0.53	0.55	0.56	0.54	0.57	0.53	0.57	0.55
4	Administrative Office Top	0.54	0.56	0.54	0.56	0.55	0.57	0.54	0.57	0.55
5	In front of Cooling Tower-III	0.52	0.53	0.50	0.53	0.55	0.54	0.50	0.55	0.53
6	Near IPP Office	0.55	0.54	0.56	0.59	0.61	0.60	0.54	0.61	0.58
7	Near CHP ETP building	0.58	0.61	0.62	0.63	0.64	0.65	0.58	0.65	0.62
8	Kurebaga Ash Pond	0.58	0.59	0.61	0.59	0.57	0.58	0.57	0.61	0.59
9	Siriapali Ash Pond	0.60	0.62	0.59	0.61	0.60	0.59	0.59	0.62	0.60
10	Katikela Ash Pond	0.62	0.61	0.60	0.62	0.61	0.60	0.60	0.62	0.61

vi. Pb (µg/m^3)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (24 Hours)		**1.0**								
1	Vedanta Township	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	Near Gate No-1	0.13	0.14	0.13	0.15	0.14	0.13	0.13	0.15	0.14
3	Near WTP Clarifier	0.13	0.15	0.14	0.14	0.13	0.14	0.13	0.15	0.14
4	Administrative Office Top	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5	In front of Cooling Tower-III	0.15	0.14	0.16	0.15	0.14	0.12	0.12	0.16	0.14
6	Near IPP Office	0.14	0.13	0.14	0.13	0.14	0.13	0.13	0.14	0.14
7	Near CHP ETP building	0.14	0.16	0.15	0.13	0.14	0.13	0.13	0.16	0.14
8	Kurebaga Ash Pond	0.13	0.14	0.15	0.16	0.15	0.13	0.13	0.16	0.14
9	Siriapali Ash Pond	0.15	0.14	0.16	0.15	0.14	0.16	0.14	0.16	0.15
10	Katikela Ash Pond	0.14	0.15	0.15	0.14	0.15	0.13	0.13	0.15	0.14

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02948** ***Date: 07.05.2026***

vii. As (ng/m^3)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (24 Hours)		06								
1	Vedanta Township	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	Near Gate No-1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
3	Near WTP Clarifier	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
4	Administrative Office Top	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5	In front of Cooling Tower-III	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
6	Near IPP Office	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
7	Near CHP ETP building	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
8	Kurebaga Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9	Siriapali Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Katikela Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

viii. Ni (ng/m^3)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (24 Hours)		20								
1	Vedanta Township	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	Near Gate No-1	0.14	0.14	0.15	0.16	0.15	0.12	0.12	0.16	0.14
3	Near WTP Clarifier	0.13	0.14	0.13	0.15	0.14	0.13	0.13	0.15	0.14
4	Administrative Office Top	0.15	0.14	0.13	0.14	0.15	0.14	0.13	0.15	0.14
5	In front of Cooling Tower-III	0.14	0.13	0.15	0.14	0.15	0.16	0.13	0.16	0.15
6	Near IPP Office	0.13	0.13	0.14	0.15	0.16	0.13	0.13	0.16	0.14
7	Near CHP ETP building	0.13	0.16	0.15	0.16	0.14	0.15	0.13	0.16	0.15
8	Kurebaga Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9	Siriapali Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Katikela Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02949** *Date: 07.05.2026*

ix. BaP (ng/m^3)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (24 Hours)		01								
1	Vedanta Township	0.15	0.15	0.16	0.17	0.19	0.17	0.15	0.19	0.17
2	Near Gate No-1	0.13	0.14	0.15	0.16	0.16	0.14	0.13	0.16	0.15
3	Near WTP Clarifier	0.12	0.14	0.13	0.15	0.13	0.14	0.12	0.15	0.14
4	Administrative Office Top	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5	In front of Cooling Tower-III	0.15	0.14	0.16	0.15	0.14	0.13	0.13	0.16	0.15
6	Near IPP Office	0.13	0.14	0.16	0.15	0.14	0.13	0.13	0.16	0.14
7	Near CHP ETP building	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
8	Kurebaga Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9	Siriapali Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Katikela Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

x. Benzene (µg/m^3)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (24 Hours)		05								
1	Vedanta Township	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2	Near Gate No-1	0.25	0.24	0.23	0.25	0.26	0.23	0.23	0.26	0.24
3	Near WTP Clarifier	0.23	0.25	0.24	0.26	0.25	0.24	0.23	0.26	0.25
4	Administrative Office Top	0.15	0.17	0.16	0.17	0.14	0.13	0.13	0.17	0.15
5	In front of Cooling Tower-III	0.16	0.14	0.13	0.15	0.12	0.14	0.12	0.16	0.14
6	Near IPP Office	0.13	0.15	0.16	0.15	0.14	0.15	0.13	0.16	0.15
7	Near CHP ETP building	0.16	0.13	0.14	0.16	0.15	0.14	0.13	0.16	0.15
8	Kurebaga Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
9	Siriapali Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Katikela Ash Pond	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02950** ***Date: 07.05.2026***

xi. NH_3 (µg/m_3)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (24 Hours)		**400**								
1	Vedanta Township	21.8	21.5	22.0	22.1	22.2	22.1	21.5	22.2	22.0
2	Near Gate No-1	23.2	23.0	23.3	24.7	24.5	24.8	23.0	24.8	23.9
3	Near WTP Clarifier	23.0	22.9	23.2	22.9	23.2	23.4	22.9	23.4	23.1
4	Administrative Office Top	22.3	24.5	24.9	25.5	25.0	25.9	22.3	25.9	24.7
5	In front of Cooling Tower-III	20.6	21.2	21.6	21.5	21.6	21.7	20.6	21.7	21.4
6	Near IPP Office	21.3	21.4	21.5	21.3	20.3	20.4	20.3	21.5	21.0
7	Near CHP ETP building	21.8	21.6	21.4	21.5	21.7	22.3	21.4	22.3	21.7
8	Kurebaga Ash Pond	21.0	21.4	21.2	21.9	22.0	22.2	21.0	22.2	21.6
9	Siriapali Ash Pond	21.3	21.1	22.3	22.5	21.5	21.7	21.1	22.5	21.7
10	Katikela Ash Pond	21.0	21.7	20.4	20.6	20.5	20.7	20.4	21.7	20.8

xii. Ozone (µg/m^3)

Sl. No.	Sampling Location	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
Limit (8 Hours)		**100**								
1	Vedanta Township	6.3	6.5	6.4	6.6	6.5	6.4	6.3	6.6	6.5
2	Near Gate No-1	6.4	6.6	6.4	6.5	6.6	6.4	6.4	6.6	6.5
3	Near WTP Clarifier	6.3	6.7	6.5	6.6	6.5	6.4	6.3	6.7	6.5
4	Administrative Office Top	6.3	6.4	6.5	6.6	6.5	6.4	6.3	6.6	6.5
5	In front of Cooling Tower-III	6.1	6.2	6.1	6.4	6.5	6.4	6.1	6.5	6.3
6	Near IPP Office	6.8	6.3	6.8	6.6	6.5	6.3	6.3	6.8	6.6
7	Near CHP ETP building	6.4	6.7	6.6	6.7	6.8	6.5	6.4	6.8	6.6
8	Kurebaga Ash Pond	6.3	6.6	6.7	6.5	6.4	6.5	6.3	6.7	6.5
9	Siriapali Ash Pond	6.0	6.3	6.7	6.5	6.4	6.6	6.0	6.7	6.4
10	Katikela Ash Pond	6.2	6.5	6.4	6.3	6.4	6.5	6.2	6.5	6.4

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02951** *Date: 07.05.2026*

3. Noise:

i. Day Time (6.00 a.m. to 10.00 p.m.)

Sl. No.	Sampling Location	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
1	Cooling tower pump house	75	69.6	69.0	69.2	69.8	68.5	68.8	68.5	69.8	69.2
2	Raw water pump house	75	71.2	70.9	70.1	70.5	70.1	69.5	69.5	71.2	70.4
3	Near Banjari gate	75	69.2	68.7	69.3	68.7	69.4	69.8	68.7	69.8	69.2
4	Near Main gate	75	61.5	62.3	63.1	64.5	63.8	64.2	61.5	64.5	63.2
5	Geho pump house	75	70.6	71.5	70.8	70.1	70.5	70.1	70.1	71.5	70.6
6	Coal Yard Track Hopper	75	66.2	65.9	66.2	65.9	66.2	65.8	65.8	66.2	66.0
7	Coal Handling plant	75	65.8	66.3	65.8	66.2	65.8	66.3	65.8	66.3	66.0
8	I.D fan- Near Boiler, Unit-II	75	71.2	71.8	71.2	70.7	70.1	70.5	70.1	71.8	70.9
9	Chimney area Near Boiler, Unit-II	75	72.0	72.5	72.9	72.3	72.5	72.8	72.0	72.9	72.5
10	Boiler Feed Pump area Unit-II	75	74.1	74.2	74.5	73.9	74.1	74.4	73.9	74.5	74.2
11	Turbine Area Unit-II	75	74.5	73.9	73.0	73.8	73.3	73.0	73.0	74.5	73.6
12	Mill Area Unit-II	75	73.0	73.8	73.1	72.7	72.5	71.9	71.9	73.8	72.8
13	Compressor House Unit-II	75	73.9	72.6	72.5	72.9	72.1	72.2	72.1	73.9	72.7
15	Vedanta township	55	54.0	54.2	54.0	54.2	54.0	54.3	54.0	54.3	54.1

ii. Night Time (10.00 p.m. to 6.00 a. m.)

Sl. No.	Sampling Location	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
1	Cooling tower pump house	70	61.2	60.9	60.2	60.5	60.1	60.6	60.1	61.2	60.6
2	Raw water pump house	70	59.2	58.6	59.3	58.7	59.2	58.6	58.6	59.3	58.9
3	Near Banjari gate	70	62.9	63.5	64.0	64.5	63.8	64.1	62.9	64.5	63.8
4	Near Main gate	70	59.6	58.2	58.6	59.1	59.6	59.9	58.2	59.9	59.2
5	Geho pump house	70	65.8	66.1	65.9	66.2	65.2	66.1	65.2	66.2	65.9
6	Coal Yard Track Hopper	70	60.6	61.4	61.2	60.8	60.1	60.5	60.1	61.4	60.8
7	Coal Handling plant	70	63.1	62.9	63.2	63.9	64.1	63.7	62.9	64.1	63.5
8	I.D fan- Near Boiler, Unit-II	70	63.8	64.0	64.5	64.2	64.5	64.2	63.8	64.5	64.2
9	Chimney area Near Boiler, Unit-II	70	64.2	64.5	62.9	61.8	62.2	62.0	61.8	64.5	62.9
10	Boiler Feed Pump area Unit-II	70	65.6	66.1	65.6	66.2	65.9	66.1	65.6	66.2	65.9
11	Turbine Area Unit-II	70	64.0	64.3	64.6	64.5	64.3	64.5	64.0	64.6	64.4
12	Mill Area Unit-II	70	69.1	68.6	69.1	68.8	68.4	67.8	67.8	69.1	68.6
13	Compressor House Unit-II	70	62.7	62.5	63.3	62.9	62.0	62.3	62.0	63.3	62.6
15	Vedanta township	45	44.1	44.2	44.5	44.4	44.5	44.2	44.1	44.5	44.3

Reviewed By **Approved By**

Ref: **Envlab/26-27/TR-02952** ***Date: 07.05.2026***

4. Water:

a) Effluent Treatment Plant (ETP) Outlet:

Parameters	Unit	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
pH	-	6.5-9.0	7.28	7.26	7.28	7.25	7.22	7.26	7.2	7.3	7.3
TSS	mg/l	100	30	36	35	36	33	35	30.0	36.0	34.2
BOD (5) days at 20 C	mg/l	30	12.4	12.8	12.2	11.8	11.2	11.0	11.0	12.8	11.9
COD	mg/l	250	44.2	39.8	38	35	32	29	29.0	44.2	36.3

b) Sewage Treatment Plant (STP) Outlet:

Parameters	Unit	Limit	Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
pH	mg/l	6.5-9.0	7.24	7.25	7.29	7.32	7.38	7.33	7.2	7.4	7.3
Total Suspended Solids	mg/l	100	25	28	26	25	26	24	24.0	28.0	25.7
BOD	mg/l	30	12	11.6	12	12.1	12	12.4	11.6	12.4	12.0
Fecal Coliform	MPN/100 ml	1000	70	79	84	70	63	70	63.0	84.0	72.7

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Ref: **Envlab/26-27/TR-02953** ***Date: 07.05.2026***

c) Surface Water:

Sl. No.	Parameter	Unit	SW1								
			Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
1	Colour	Hazen	15	10	10	10	10	10	10.0	15.0	10.8
2	pH	--	7.39	7.34	7.31	7.34	7.31	7.38	7.31	7.39	7.35
3	DO	mg/l	4.98	4.8	4.9	4.8	4.7	4.6	4.6	5.0	4.8
4	Chloride	mg/l	20	23	20	23	20	23	20.0	22.5	21.3
5	Total Dissolved solids	mg/l	311	315	312	306	312	304	304.0	315.0	310.0
6	Suspended solids	mg/l	60	63	62	60	62	66	60.0	66.0	62.2
7	Oil &Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	BOD (5) days at 20^0 C	mg/l	2.0	2.1	2.2	2.3	2.4	2.5	2.0	2.5	2.3
9	Arsenic as As	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11	Cadmium as Cd	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexachromium as Cr^{+6}	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14	Zinc as Zn	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15	Selenium as Se	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	0.30	0.33	0.34	0.36	0.33	0.38	0.30	0.38	0.34
18	Sulphate as (SO_4)	mg/l	14.9	15.5	16	15.8	16.1	15.5	14.9	16.1	15.6
19	Phenolic compounds as C_6H_5OH	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	0.33	0.36	0.38	0.33	0.34	0.37	0.33	0.38	0.35
21	Nitrate as NO_3	mg/l	2.00	2.2	2.40	2.5	2.8	2.5	2.0	2.8	2.4
22	Anionic Detergents	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	110	120	110	120	110	120	110.0	120.0	115.0

Sampling location: SW1- Banjari Village Pond

Reviewed By **Approved By**

Ref: **Envlab/26-27/TR-02954** ***Date: 07.05.2026***

Surface Water: Continued.

Sl. No.	Parameter	Unit	SW2								
			Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
1	Colour	Hazen	20	15	15	15	15	15	15.0	20.0	15.8
2	pH	--	7.31	7.27	7.28	7.25	7.29	7.25	7.25	7.31	7.28
3	DO	mg/l	5	4.9	5	4.9	4.8	4.7	4.7	5.0	4.9
4	Chloride	mg/l	30	35	33	30	28	25	25.0	35.0	30.0
5	Total Dissolved solids	mg/l	309	320	311	318	315	322	309.0	322.0	315.8
6	Suspended solids	mg/l	64	60	58	55	58	60	55.0	64.0	59.2
7	Oil &Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	BOD (5) days at 20^0 C	mg/l	1.8	1.9	1.8	1.9	2.0	2.1	1.8	2.1	1.9
9	Arsenic as As	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11	Cadmium as Cd	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexachromium as Cr^{+6}	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14	Zinc as Zn	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15	Selenium as Se	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	0.32	0.35	0.36	0.33	0.30	0.32	0.30	0.36	0.33
18	Sulphate as (SO_4)	mg/l	15.8	16.1	16.8	16.3	16.5	16.8	15.8	16.8	16.4
19	Phenolic compounds as C_6H_5OH	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	0.32	0.30	0.33	0.39	0.36	0.32	0.30	0.39	0.34
21	Nitrate as NO_3	mg/l	1.74	1.80	1.60	1.80	1.90	1.60	1.6	1.9	1.7
22	Anionic Detergents	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	150	170	150	170	150	180	150.0	180.0	161.7

Sampling location: SW2- Bhurkamunda Village Pond

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02955** ***Date: 07.05.2026***

Surface Water: Continued.

Sl.No.	Parameter	Unit	SW3								
			Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
1	Colour	Hazen	10	10	10	10	10	10	10.0	10.0	10.0
2	pH	--	7.15	7.12	7.18	7.21	7.26	7.22	7.12	7.26	7.19
3	DO	mg/l	4.9	4.8	4.9	4.8	4.7	4.6	4.6	4.9	4.8
4	Chloride	mg/l	25	28	27.5	25	20	25	20.0	28.0	25.1
5	Total Dissolved solids	mg/l	254	265	261	266	272	286	254.0	286.0	267.3
6	Suspended solids	mg/l	72	70	68	63	65	63	63.0	72.0	66.8
7	Oil &Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	BOD (5) days at 20^0 C	mg/l	2.1	2.2	2.1	2.2	2.3	2.4	2.1	2.4	2.2
9	Arsenic as As	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11	Cadmium as Cd	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexachromium as Cr^{+6}	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14	Zinc as Zn	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15	Selenium as Se	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	0.32	0.30	0.33	0.38	0.35	0.36	0.30	0.38	0.34
18	Sulphate as (SO_4)	mg/l	14	14.4	14.8	15.5	15.8	15.9	14.0	15.9	15.1
19	Phenolic compounds as C_6H_5OH	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	0.33	0.35	0.36	0.38	0.39	0.35	0.33	0.39	0.36
21	Nitrate as NO_3	mg/l	1.70	1.66	1.7	1.5	1.7	1.8	1.5	1.8	1.7
22	Anionic Detergents	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	140	150	170	180	170	180	140.0	180.0	165.0

Sampling location: SW3- Banjari Nallah Upstream

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Approved By

Ref: **Envlab/26-27/TR-02956** ***Date: 07.05.2026***

Surface Water: Continued.

Sl. No.	Parameter	Unit	SW4								
			Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
1	Colour	Hazen	15	15	15	15	15	15	15.0	15.0	15.0
2	pH	--	6.83	6.89	6.92	6.96	6.9	6.96	6.83	6.96	6.91
3	DO	mg/l	4.8	4.7	4.8	4.7	4.6	4.5	4.5	4.8	4.7
4	Chloride	mg/l	27.5	30	32.5	37.5	32.5	30	27.5	37.5	31.7
5	Total Dissolved solids	mg/l	260	263	260	258	266	275	258.0	275.0	263.7
6	Suspended solids	mg/l	70	75	72	70	73	75	70.0	75.0	72.5
7	Oil &Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	BOD (5) days at 20 ^{0}C	mg/l	2.1	2.2	2.1	2.2	2.3	2.4	2.1	2.4	2.2
9	Arsenic as As	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11	Cadmium as Cd	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexachromium as Cr+6	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14	Zinc as Zn	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15	Selenium as Se	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	0.35	0.32	0.34	0.35	0.32	0.30	0.30	0.35	0.33
18	Sulphate as (SO4)	mg/l	16.8	16.3	16.8	17.2	17.5	16.6	16.3	17.5	16.9
19	Phenolic compounds as C6H5OH	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	0.35	0.37	0.35	0.32	0.30	0.33	0.30	0.37	0.34
21	Nitrate as NO3	mg/l	1.81	1.9	1.88	1.90	1.6	1.50	1.5	1.9	1.8
22	Anionic Detergents	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	170	140	150	170	150	200	140.0	200.0	163.3

Sampling location: SW4- Banjari Nallah Downstream

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02957** *Date: 07.05.2026*

Surface Water: Continued.

Sl. No.	Parameter	Unit	SW5								
			Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
1	Colour	Hazen	15	10	10	10	10	10	10.0	15.0	10.8
2	pH	--	6.92	6.98	6.95	6.98	6.94	6.98	6.92	6.98	6.96
3	DO	mg/l	5.3	5.2	5.1	5.0	4.9	4.8	4.8	5.3	5.1
4	Chloride	mg/l	25	27.5	30	32.5	28.5	27.5	25.0	32.5	28.5
5	Total Dissolved solids	mg/l	212	208	205	212	215	218	205.0	218.0	211.7
6	Suspended solids	mg/l	62	58	55	58	56	60	55.0	62.0	58.2
7	Oil &Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	BOD (5) days at 20 ^{0}C	mg/l	1.8	1.9	1.8	1.9	2.0	2.1	1.8	2.1	1.9
9	Arsenic as As	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	0.018	0.015	0.019	0.021	0.024	0.022	0.015	0.024	0.0198
11	Cadmium as Cd	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexachromium as Cr+6	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	0.015	0.012	0.016	0.014	0.015	0.017	0.012	0.017	0.0148
14	Zinc as Zn	mg/l	0.16	0.18	0.16	0.14	0.16	0.19	0.14	0.19	0.165
15	Selenium as Se	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	0.31	0.33	0.29	0.32	0.31	0.29	0.29	0.33	0.31
18	Sulphate as (SO4)	mg/l	15.9	15.2	14.9	14.2	14	14.8	14.0	15.9	14.8
19	Phenolic compounds as C6H5OH	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	0.32	0.34	0.30	0.36	0.33	0.36	0.30	0.36	0.34
21	Nitrate as NO3	mg/l	1.77	1.69	1.66	1.4	1.45	1.44	1.4	1.8	1.6
22	Anionic Detergents	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	150	150	120	110	120	110	110.0	150.0	126.7

Sampling location: SW5- Kharkhari Nallah Upstream

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02958** ***Date: 07.05.2026***

Surface Water: Continued.

Sl. No.	Parameter	Unit	SW6								
			Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Min	Max	Avg
1	Colour	Hazen	20	15	15	15	15	15	15.0	20.0	15.8
2	pH	--	6.98	7.00	7.10	7.14	7.12	7.22	6.98	7.22	7.09
3	DO	mg/l	5.4	5.3	5.2	5.1	5	4.9	4.9	5.4	5.2
4	Chloride	mg/l	35	30	35	30	33.5	30	30.0	35.0	32.3
5	Total Dissolved solids	mg/l	208	213	221	229	221	226	208.0	229.0	219.7
6	Suspended solids	mg/l	63	67	62	65	68	72	62.0	72.0	66.2
7	Oil &Grease	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	BOD (5) days at 20 ^{0}C	mg/l	1.9	1.8	1.7	1.8	1.9	2.0	1.7	2.0	1.9
9	Arsenic as As	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10	Lead as Pb	mg/l	0.017	0.016	0.021	0.022	0.021	0.019	0.016	0.022	0.0193
11	Cadmium as Cd	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12	Hexachromium as Cr+6	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Copper as Cu	mg/l	0.020	0.17	0.18	0.16	0.013	0.015	0.013	0.18	0.093
14	Zinc as Zn	mg/l	0.18	0.2	0.23	0.25	0.24	0.22	0.18	0.25	0.22
15	Selenium as Se	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
16	Cyanide as CN	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17	Fluoride as F	mg/l	0.35	0.32	0.3	0.27	0.29	0.28	0.27	0.35	0.30
18	Sulphate as (SO4)	mg/l	18.2	17.8	18.5	18.9	19.3	19.5	17.8	19.5	18.7
19	Phenolic compounds as C6H5OH	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Iron as Fe	mg/l	0.30	0.33	0.31	0.38	0.36	0.35	0.30	0.38	0.34
21	Nitrate as NO3	mg/l	2.1	2	2.1	2.2	2.1	2.15	2.0	2.2	2.1
22	Anionic Detergents	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND
23	Total Coliform	MPN/100ml	210	180	150	200	210	200	150.0	210.0	191.7

Sampling location: SW6- Kharkhari Nallah Downstream

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02959** ***Date: 07.05.2026***

d) Ground Water – Village Area:

Sl. No	Parameter	Unit	Standard as per IS: 10500	GW1		GW2	
				Oct'25	Jan'26	Oct'25	Jan'26
1	Colour	Hazen	5	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	1	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	7.1	7.21	7.1	7.18
6	Total Hardness (as CaCO3)	mg/l	200	100	105	126	133
7	Iron (as Fe)	mg/l	1	0.36	0.32	0.41	0.36
8	Chloride (as Cl)	mg/l	250	30	22.5	32.5	35
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	314	321	258	260
11	Calcium (as Ca)	mg/l	75	32.4	33.4	34.2	35.6
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	BDL	BDL	BDL	BDL
14	Sulphate as (SO4)	mg/l	200	15.9	16.8	16	17.5
15	Nitrate (as NO3)	mg/l	45	2.15	2.23	2.30	2.36
16	Fluoride (as F)	mg/l	1	0.3	0.33	0.25	0.32
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.45	0.42	0.51	0.54
26	Chromium as (Cr+6)	mg/l	0.05	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND
28	Alkalinity	mg/l	200	35	30	45	40
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL

Sampling Locations:

GW1-Hand pump of North side of Ash pond, near Siriapali

GW2-Hand pump of East side of Ash pond, near Purna school

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02960** ***Date: 07.05.2026***

Ground Water – Village Area Continued.

Sl. No	Parameter	Unit	Standard as per IS: 10500	GW3		GW4	
				Oct'25	Jan'26	Oct'25	Jan'26
1	Colour	Hazen	5	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	1	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	7.18	7.29	7.1	7.11
6	Total Hardness (as CaCO3)	mg/l	200	150	156	90	84
7	Iron (as Fe)	mg/l	1	0.35	0.31	0.38	0.35
8	Chloride (as Cl)	mg/l	250	25	27	35	35
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	285	294	230	224
11	Calcium (as Ca)	mg/l	75	38.8	39.1	34.4	35.1
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	BDL	BDL	BDL	BDL
14	Sulphate as (SO4)	mg/l	200	18.9	19.4	14.4	13.9
15	Nitrate (as NO3)	mg/l	45	2.4	2.45	1.35	1.29
16	Fluoride (as F)	mg/l	1	0.30	0.39	0.34	0.31
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.46	0.42	0.41	0.38
26	Chromium as (Cr+6)	mg/l	0.05	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND
28	Alkalinity	mg/l	200	50	55	45	40
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL

Sampling location:

GW3: Hand Pump of West side of Ash pond, Bhagipali Village

GW4: Bhurkamunda Village

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Ref: **Envlab/26-27/TR-02961** ***Date: 07.05.2026***

Ground Water – Village Area Continued.

Sl. No	Parameter	Unit	Standard as per IS: 10500	GW5		GW6	
				Oct'25	Jan'26	Oct'25	Jan'26
1	Colour	Hazen	5	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	1	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	6.75	6.86	6.88	6.93
6	Total Hardness (as CaCO3)	mg/l	200	101	102	108	112
7	Iron (as Fe)	mg/l	1	0.30	0.33	0.35	0.38
8	Chloride (as Cl)	mg/l	250	35	37.5	32.5	30
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	228	239	289	296
11	Calcium (as Ca)	mg/l	75	32.9	33.8	36	37.2
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	BDL	BDL	BDL	BDL
14	Sulphate as (SO4)	mg/l	200	16.8	17.1	17.1	17.8
15	Nitrate (as NO3)	mg/l	45	2.30	2.25	1.7	1.62
16	Fluoride (as F)	mg/l	1	0.42	0.46	0.34	0.38
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.60	0.65	0.58	0.52
26	Chromium as (Cr+6)	mg/l	0.05	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND
28	Alkalinity	mg/l	200	50	55	50	55
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL

Sampling location: GW5: Hand Pump of South side of Ash pond, Katikela Village GW6: Badmal Village

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02962** ***Date: 07.05.2026***

Ground Water – Village Area Continued.

Sl. No	Parameter	Unit	Standard as per IS: 10500	GW7		GW8	
				Oct'25	Jan'26	Oct'25	Jan'26
1	Colour	Hazen	5	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	1	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	7.11	7.14	7.08	7.12
6	Total Hardness (as CaCO3)	mg/l	200	160	148	132	138
7	Iron (as Fe)	mg/l	1	0.33	0.35	0.4	0.47
8	Chloride (as Cl)	mg/l	250	40	37.5	42.5	35
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	329	334	300	312
11	Calcium (as Ca)	mg/l	75	45.7	44.8	48.6	49.5
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	BDL	BDL	BDL	BDL
14	Sulphate as (SO4)	mg/l	200	13.5	13	18	17.5
15	Nitrate (as NO3)	mg/l	45	2.28	2.2	2.35	2.31
16	Fluoride (as F)	mg/l	1	0.25	0.29	0.23	0.26
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.6	0.63	0.66	0.68
26	Chromium as (Cr+6)	mg/l	0.05	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND
28	Alkalinity	mg/l	200	40	45	30	35
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL

Sampling locations: GW7: Neoheight GW8: Banjari Village

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Ref: **Envlab/26-27/TR-02963** ***Date: 07.05.2026***

Ground Water – Village Area Continued.

Sl. No	Parameter	Unit	Standard as per IS: 10500	GW9	
				Oct'25	Jan'26
1	Colour	Hazen	5	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable
4	Turbidity	NTU	1	<1.0	<1.0
5	pH Value	-	6.5-8.5	7.14	7.2
6	Total Hardness (as CaCO3)	mg/l	200	150	164
7	Iron (as Fe)	mg/l	1	0.31	0.32
8	Chloride (as Cl)	mg/l	250	45	40
9	Residual free Chlorine	mg/l	0.2	ND	ND
10	Dissolved solids	mg/l	500	288	295
11	Calcium (as Ca)	mg/l	75	42.5	42.3
12	Copper (as Cu)	mg/l	0.05	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	BDL	BDL
14	Sulphate as (SO4)	mg/l	200	15.6	16.4
15	Nitrate (as NO3)	mg/l	45	1.48	1.53
16	Fluoride (as F)	mg/l	1	0.31	0.33
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.65	0.69
26	Chromium as (Cr+6)	mg/l	0.05	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND
28	Alkalinity	mg/l	200	45	40
29	Aluminium as Al	mg/l	0.03	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL

Sampling location: GW9: Sarbahal

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02964** ***Date: 07.05.2026***

Ground Water - Ash Pond Area : Kurebaga Ash Pond

Sl. No	Parameter	Unit	Standard as per IS:10500	GW1								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Hazen	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	7.15	7.12	7.1	7.15	7.12	7.22	7.10	7.22	7.14
6	Total Hardness (as $CaCO_3$)	mg/l	200	140	136	128	122	130	134	122.0	140.0	131.7
7	Iron (as Fe)	mg/l	1	0.32	0.35	0.32	0.35	0.32	0.33	0.32	0.35	0.33
8	Chloride (as Cl)	mg/l	250	33	35	32.5	30	25	27	25.0	35.0	30.3
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	318	310	302	314	307	318	302.0	318.0	311.5
11	Calcium (as Ca)	mg/l	75	34.8	33.6	32.9	33.2	32.6	33.4	32.6	34.8	33.4
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.040	0.042	0.039	0.043	0.045	0.046	0.039	0.046	0.043
14	Sulphate as (SO_4)	mg/l	200	16.2	15.9	16.4	15.7	16.2	16.2	15.7	16.4	16.1
15	Nitrate (as NO_3)	mg/l	45	2.6	2.5	2.2	2.4	2.5	2.1	2.1	2.6	2.4
16	Fluoride (as F)	mg/l	1	0.28	0.25	0.28	0.32	0.34	0.33	0.3	0.3	0.3
17	Phenolic compounds (as C_6H_5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.26	0.28	0.26	0.29	0.26	0.26	0.3	0.3	0.3
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	Alkalinity	mg/l	200	32	30	35	30	35	35	30.0	35.0	32.8
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Sampling Locations: Kurebaga Ash Pond GW1 - Bore well (East)

Reviewed By **Approved By**

Ref: **Envlab/26-27/TR-02965** ***Date: 07.05.2026***

Ground Water - Ash Pond Area: Kurebaga Ash Pond Continued.

Sl. No	Parameter	Unit	Standard as per IS:10500	GW2								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Hazen	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	6.9	6.96	6.91	6.98	6.95	6.87	6.87	6.98	6.93
6	Total Hardness (as $CaCO_3$)	mg/l	200	156	155	160	156	161	160	155.0	161.0	158.0
7	Iron (as Fe)	mg/l	1	0.3	0.27	0.25	0.26	0.28	0.27	0.25	0.30	0.27
8	Chloride (as Cl)	mg/l	250	30	34	35	37.5	35	33	30.0	37.5	34.1
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	310	302	296	290	299	298	290.0	310.0	299.2
11	Calcium (as Ca)	mg/l	75	31.2	30.9	28.9	27.6	28.8	29.5	27.6	31.2	29.5
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.042	0.045	0.042	0.045	0.04	0.045	0.040	0.045	0.043
14	Sulphate as (SO_4)	mg/l	200	16.9	16.0	15.8	16.3	16.8	16.8	15.8	16.9	16.4
15	Nitrate (as NO_3)	mg/l	45	2.2	2.0	2.3	2.5	2.3	2.0	2.0	2.5	2.2
16	Fluoride (as F)	mg/l	1	0.35	0.31	0.33	0.35	0.38	0.32	0.3	0.4	0.3
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.33	0.30	0.31	0.33	0.35	0.3	0.3	0.4	0.3
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	Alkalinity	mg/l	200	40	35	40	45	40	40	35.0	45.0	40.0
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Sampling Locations: Kurebaga Ash Pond GW2 - Bore well (West)

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02966** ***Date: 07.05.2026***

Ground Water - Ash Pond Area: Kurebaga Ash Pond Continued

Sl. No	Parameter	Unit	Standard as per IS:10500	GW3								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Haz en	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	7.24	7.22	7.18	7.22	7.25	7.25	7.18	7.25	7.23
6	Total Hardness (as $CaCO_3$)	mg/l	200	169	168	176	184	170	171	168.0	184.0	173.0
7	Iron (as Fe)	mg/l	1	0.35	0.36	0.33	0.36	0.35	0.34	0.33	0.36	0.35
8	Chloride (as Cl)	mg/l	250	45	40	45	42.5	45	43	40.0	45.0	43.3
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	344	340	331	329	335	333	329.0	344.0	335.3
11	Calcium (as Ca)	mg/l	75	35.6	34.8	33.6	34.2	34.9	35.2	33.6	35.6	34.7
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.045	0.048	0.045	0.048	0.046	0.048	0.045	0.048	0.047
14	Sulphate as (SO_4)	mg/l	200	19.8	20.8	21.4	22	21.5	21.3	19.8	22.0	21.1
15	Nitrate (as NO_3)	mg/l	45	3.5	3.1	3.2	3	3.2	3.5	3.0	3.5	3.3
16	Fluoride (as F)	mg/l	1	0.37	0.34	0.35	0.39	0.41	0.36	0.3	0.4	0.4
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.4	0.36	0.33	0.35	0.38	0.32	0.3	0.4	0.4
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	Alkalinity	mg/l	200	45	48	45	50	55	55	45.0	55.0	49.7
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Sampling location: Kurebaga Ash Pond GW3 - Bore well (North)

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02967** ***Date: 07.05.2026***

Ground Water - Ash Pond Area: Kurebaga Ash Pond Continued

Sl. No	Parameter	Unit	Standard as per IS:10500	GW4								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Hazen	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	7.12	7.10	7.15	7.12	7.1	7.2	7.10	7.20	7.13
6	Total Hardness (as $CaCO_3$)	mg/l	200	152	150	154	160	156	166	150.0	166.0	156.3
7	Iron (as Fe)	mg/l	1	0.35	0.32	0.3	0.33	0.31	0.29	0.29	0.35	0.32
8	Chloride (as Cl)	mg/l	250	38	36	35	30	35	34	30.0	37.5	34.6
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	302	309	315	323	328	316	302.0	328.0	315.5
11	Calcium (as Ca)	mg/l	75	35.5	33.6	32.5	32	31.6	33.8	31.6	35.5	33.2
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.04	0.044	0.04	0.044	0.042	0.046	0.040	0.046	0.043
14	Sulphate as (SO_4)	mg/l	200	18	18.4	18.8	19.6	20.2	20.5	18.0	20.5	19.3
15	Nitrate (as NO_3)	mg/l	45	3.0	2.8	2.5	2.9	2.80	2.7	2.5	3.0	2.8
16	Fluoride (as F)	mg/l	1	0.30	0.33	0.32	0.38	0.36	0.35	0.3	0.4	0.3
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.34	0.32	0.3	0.27	0.25	0.26	0.3	0.3	0.3
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	Alkalinity	mg/l	200	40	45	42	45	40	45	40.0	45.0	42.8
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Sampling location: Kurebaga Ash Pond GW4 - Bore well (South)

VISIONTEK CONSULTANCY SERVICES PVT. LTD. BBSR

Reviewed By

VISIONTEK CONSULTANCY SERVICES PVT. LTD.

Approved By

Ref: **Envlab/26-27/TR-02968** ***Date: 07.05.2026***

Ground Water - Ash Pond Area: Katikela Ash Pond

Sl. No	Parameter	Unit	Standard as per IS:10500	GW1								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Hazen	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	6.70	6.77	6.82	6.89	6.92	6.87	6.70	6.92	6.83
6	Total Hardness (as $CaCO_3$)	mg/l	200	90	94	90	95	92	90	90.0	95.0	91.8
7	Iron (as Fe)	mg/l	1	0.31	0.33	0.35	0.33	0.35	0.34	0.31	0.35	0.34
8	Chloride (as Cl)	mg/l	250	35	40	37.5	30	35	32.5	30.0	40.0	35.0
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	277	281	269	278	283	277	269.0	283.0	277.5
11	Calcium (as Ca)	mg/l	75	35.6	34.4	33.6	33.9	34.5	33.6	33.6	35.6	34.3
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.038	0.035	0.033	0.037	0.039	0.033	0.033	0.039	0.036
14	Sulphate as (SO_4)	mg/l	200	14.2	13.6	14.1	13.7	14.4	14	13.6	14.4	14.0
15	Nitrate (as NO_3)	mg/l	45	1.44	1.5	1.47	1.44	1.47	1.42	1.4	1.5	1.5
16	Fluoride (as F)	mg/l	1	0.31	0.30	0.33	0.36	0.33	0.35	0.3	0.4	0.3
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.31	0.32	0.34	0.39	0.33	0.3	0.3	0.4	0.3
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28	Alkalinity	mg/l	200	25	33	30	35	30	35	25.0	35.0	31.3
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	0.038	0.033	0.038	0.035	0.033	0.035	0.033	0.038	0.035

Sampling Locations: Katikela Ash Pond GW1 - Bore well (East)

Reviewed By **Approved By**

Ref: **Envlab/26-27/TR-02969** ***Date: 07.05.2026***

Ground Water - Ash Pond Area: Katikela Ash Pond Continued

Sl. No	Parameter	Unit	Standard as per IS:10500	GW2								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Hazen	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	6.96	6.8	6.75	6.7	6.77	6.75	6.70	6.96	6.79
6	Total Hardness (as $CaCO_3$)	mg/l	200	104	96	92	90	88	85	85.0	104.0	92.5
7	Iron (as Fe)	mg/l	1	0.34	0.32	0.3	0.36	0.32	0.3	0.30	0.36	0.32
8	Chloride (as Cl)	mg/l	250	43	38.5	35	37.5	40	35	35.0	42.5	38.1
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	311	305	311	305	312	307	305.0	312.0	308.5
11	Calcium (as Ca)	mg/l	75	42.0	40.8	41.2	40.8	40.1	41.2	40.1	42.0	41.0
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.039	0.036	0.038	0.040	0.042	0.045	0.036	0.045	0.040
14	Sulphate as (SO_4)	mg/l	200	15.4	16	16.8	17.5	17	16.5	15.4	17.5	16.5
15	Nitrate (as NO_3)	mg/l	45	1.78	1.81	1.77	1.82	1.9	1.86	1.8	1.9	1.8
16	Fluoride (as F)	mg/l	1	0.33	0.32	0.31	0.28	0.26	0.28	0.3	0.3	0.3
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.35	0.34	0.35	0.36	0.35	0.38	0.3	0.4	0.4
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28	Alkalinity	mg/l	200	40	35	36	35	40.0	37	35.0	40.0	37.2
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	0.026	0.03	0.033	0.039	0.036	0.038	0.026	0.039	0.034

Sampling Locations: Katikela Ash Pond GW2 - Bore well (West)

Reviewed By **Approved By**

Ref: **Envlab/26-27/TR-02970** ***Date: 07.05.2026***

Ground Water - Ash Pond Area: Katikela Ash Pond Continued

Sl. No	Parameter	Unit	Standard as per IS:10500	GW3								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Hazen	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	7.13	7.22	7.18	7.21	7.16	7.2	7.13	7.22	7.18
6	Total Hardness (as $CaCO_3$)	mg/l	200	135	122	115	121	118	122	115.0	135.0	122.2
7	Iron (as Fe)	mg/l	1	0.41	0.36	0.37	0.4	0.43	0.41	0.36	0.43	0.40
8	Chloride (as Cl)	mg/l	250	45	47.5	45	42	45	40	40.0	47.5	44.1
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	322	316	320	331	326	334	316.0	334.0	324.8
11	Calcium (as Ca)	mg/l	75	43.6	41.5	43.9	44.5	43.6	42.2	41.5	44.5	43.2
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.05	0.044	0.04	0.043	0.044	0.046	0.040	0.050	0.045
14	Sulphate as (SO_4)	mg/l	200	16.6	17.1	18.9	18.4	18.8	19.6	16.6	19.6	18.2
15	Nitrate (as NO_3)	mg/l	45	1.78	1.82	1.9	1.96	1.95	1.90	1.8	2.0	1.9
16	Fluoride (as F)	mg/l	1	0.35	0.38	0.35	0.38	0.38	0.36	0.4	0.4	0.4
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.41	0.43	0.42	0.44	0.45	0.42	0.4	0.5	0.4
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28	Alkalinity	mg/l	200	50	55	50	45	40	45	40.0	55.0	47.5
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	0.039	0.041	0.043	0.041	0.044	0.045	0.039	0.045	0.042

Sampling location: Katikela Ash Pond GW3 - Bore well (North)

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02971** ***Date: 07.05.2026***

Ground Water - Ash Pond Area: Katikela Ash Pond Continued

Sl. No	Parameter	Unit	Standard as per IS:10500	GW4								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Haz en	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	6.96	6.89	6.78	6.84	6.89	6.93	6.78	6.96	6.88
6	Total Hardness (as $CaCO_3$)	mg/l	200	85	80	76	82	86	80	76.0	86.0	81.5
7	Iron (as Fe)	mg/l	1	0.36	0.35	0.34	0.38	0.39	0.37	0.34	0.39	0.37
8	Chloride (as Cl)	mg/l	250	38	35	30	35	38	35	30.0	37.5	35.0
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	290	288	275	284	278	285	275.0	290.0	283.3
11	Calcium (as Ca)	mg/l	75	40.9	40.6	42.5	43.1	42.9	41.8	40.6	43.1	42.0
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.040	0.035	0.030	0.036	0.035	0.039	0.030	0.040	0.036
14	Sulphate as (SO_4)	mg/l	200	16.4	16.9	17.5	18.2	17.9	18.8	16.4	18.8	17.6
15	Nitrate (as NO_3)	mg/l	45	1.63	1.70	1.65	1.7	1.81	1.78	1.6	1.8	1.7
16	Fluoride (as F)	mg/l	1	0.32	0.35	0.31	0.34	0.37	0.33	0.3	0.4	0.3
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.36	0.39	0.36	0.32	0.3	0.35	0.3	0.4	0.3
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28	Alkalinity	mg/l	200	45	40	45	40	45	40	40.0	45.0	42.5
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	0.024	0.025	0.028	0.026	0.030	0.028	0.024	0.030	0.026

Sampling location: Katikela Ash Pond GW4 - Bore well (South)

Reviewed By **Approved By**

Ref: **Envlab/26-27/TR-02972** ***Date: 07.05.2026***

Ground Water - Ash Pond Area: Siriapali Ash Pond Continued

Sl. No	Parameter	Unit	Standard as per IS:10500	GW1								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Hazen	5	<5	<5	<5	<5	<5	<5	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	7.14	7.18	7.12	7.15	7.20	7.28	7.12	7.28	7.18
6	Total Hardness (as $CaCO_3$)	mg/l	200	141	136	132	125	132	127	125.0	141.0	132.2
7	Iron (as Fe)	mg/l	1	0.34	0.32	0.35	0.33	0.31	0.33	0.31	0.35	0.33
8	Chloride (as Cl)	mg/l	250	32.5	33.1	32.6	31.9	32.8	33.4	31.9	33.4	32.7
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	236	230	221	210	218	224	210.0	236.0	223.2
11	Calcium (as Ca)	mg/l	75	32.2	31.8	32.2	31.8	32.2	31.8	31.8	32.2	32.0
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.033	0.035	0.032	0.036	0.038	0.033	0.032	0.038	0.035
14	Sulphate as (SO_4)	mg/l	200	18.4	17.9	17.2	19.8	19.4	18.6	17.2	19.8	18.6
15	Nitrate (as NO_3)	mg/l	45	2.44	2.35	2.31	2.26	2.22	2.17	2.2	2.4	2.3
16	Fluoride (as F)	mg/l	1	0.32	0.30	0.34	0.32	0.35	0.33	0.3	0.4	0.3
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.28	0.25	0.22	0.25	0.22	0.24	0.2	0.3	0.2
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	Alkalinity	mg/l	200	30	35	30	35	30	35	30.0	35.0	32.5
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Sampling Locations: Siriapali Ash Pond GW1 - Bore well (East)

Reviewed By **Approved By**

Ref: **Envlab/26-27/TR-02973** ***Date: 07.05.2026***

Ground Water - Ash Pond Area: Siriapali Ash Pond Continued

Sl. No	Parameter	Unit	Standard as per IS:10500	GW2								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Hazen	5	<5	<5	<5	<5	<5	<5	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	6.85	6.89	6.94	6.98	6.95	7	6.85	7.00	6.94
6	Total Hardness (as $CaCO_3$)	mg/l	200	122	124	128	134	139	142	122.0	142.0	131.5
7	Iron (as Fe)	mg/l	1	0.26	0.28	0.29	0.33	0.35	0.34	0.26	0.35	0.31
8	Chloride (as Cl)	mg/l	250	30	30.6	29.8	29	29.6	28.8	28.8	30.6	29.6
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	222	220	226	229	236	245	220.0	245.0	229.7
11	Calcium (as Ca)	mg/l	75	31.6	30.6	29.8	29.2	29.7	28.6	28.6	31.6	29.9
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.035	0.038	0.036	0.035	0.032	0.030	0.030	0.038	0.034
14	Sulphate as (SO_4)	mg/l	200	22	21.9	20.2	21.4	20.9	21.4	20.2	22.0	21.3
15	Nitrate (as NO_3)	mg/l	45	2.50	2.41	2.38	2.30	2.38	2.25	2.3	2.5	2.4
16	Fluoride (as F)	mg/l	1	0.30	0.32	0.35	0.34	0.32	0.30	0.3	0.4	0.3
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.26	0.23	0.28	0.29	0.28	0.25	0.2	0.3	0.3
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	Alkalinity	mg/l	200	35	38	35	40	35	30	30.0	40.0	35.5
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Sampling Locations: Siriapali Ash Pond GW2 - Bore well (West)

Reviewed By **Approved By**

Ref: **Envlab/26-27/TR-02974** ***Date: 07.05.2026***

Ground Water - Ash Pond Area: Siriapali Ash Pond Continued

Sl. No	Parameter	Unit	Standard as per IS:10500	GW3								
				Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26	Max	Min	Avg
1	Colour	Hazen	5	<5	<5	<5	<5	<5	<5	<5.0	<5.0	<5.0
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	-	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5	pH Value	-	6.5-8.5	7.30	7.33	7.28	7.33	7.39	7.29	7.28	7.39	7.32
6	Total Hardness (as $CaCO_3$)	mg/l	200	145	141	136	140	145	153	136.0	153.0	143.3
7	Iron (as Fe)	mg/l	1	0.35	0.36	0.38	0.35	0.37	0.35	0.35	0.38	0.36
8	Chloride (as Cl)	mg/l	250	45	44.3	45	43.8	42.9	41.8	41.8	45.0	43.8
9	Residual free Chlorine	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Dissolved solids	mg/l	500	258	249	245	256	260	266	245.0	266.0	255.7
11	Calcium (as Ca)	mg/l	75	33.5	32.5	32.8	32.3	33.9	34.5	32.3	34.5	33.3
12	Copper (as Cu)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Manganese (as Mn)	mg/l	0.1	0.040	0.039	0.04	0.042	0.045	0.042	0.039	0.045	0.041
14	Sulphate as (SO_4)	mg/l	200	23.3	22.8	23.5	24.2	24.5	24.8	22.8	24.8	23.9
15	Nitrate (as NO_3)	mg/l	45	2.61	2.56	2.4	2.44	2.53	2.46	2.4	2.6	2.5
16	Fluoride (as F)	mg/l	1	0.35	0.33	0.36	0.35	0.38	0.34	0.3	0.4	0.4
17	Phenolic compounds (as C6H5OH)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Anionic Detergent (as MBAS)	mg/l	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	Mercury (as Hg)	mg/l	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Cadmium (as Cd)	mg/l	0.003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21	Selenium (as Se)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22	Arsenic (as As)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
23	Cyanide (as CN)	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24	Lead (as Pb)	mg/l	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Zinc (as Zn)	mg/l	5	0.30	0.31	0.32	0.31	0.33	0.30	0.3	0.3	0.3
26	Chromium as (Cr^{+6})	mg/l	0.05	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Mineral oil	mg/l	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	Alkalinity	mg/l	200	38	42	40	45	40	45	38.0	45.0	41.7
29	Aluminium as Al	mg/l	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
30	Boron	mg/l	0.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Sampling Locations: Siriapali Ash Pond GW3 - Bore well (North)

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02975** ***Date: 07.05.2026***

Sl. No.	Parameters	S-1		S-2		S-3		S-4	
		Oct'25	Jan'26	Oct'25	Jan'26	Oct'25	Jan'26	Oct'25	Jan'26
1	Colour	Brown	Brown	Brown	Brown	Reddish	Reddish	Brown	Brown
2	Type of Soil	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
3	pH	6.30	6.34	6.78	6.82	6.88	6.85	6.75	6.78
4	Texture	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam
5	Infiltration Rate (cm/hr)	6.4	6.6	5.5	5.8	8	8.1	5.4	5.5
6	Bulk Density (gm/cc)	1.44	1.45	1.39	1.38	1.28	1.29	1.63	1.65
7	Porosity %	38.3	38.4	39.4	39.6	53.7	51.3	38.6	38.8
8	Moisture content %	8.1	7.7	9.0	8.4	8.5	8.1	8.3	7.9
9	Fluoride %	0.0089	0.0086	0.0060	0.0063	0.0081	0.009	0.0066	0.0070
10	Silica as SiO_2 %	28.6	29.2	31.5	31.2	24.8	24.4	29	29.4
11	Chloride %	0.077	0.079	0.105	0.11	0.044	0.046	0.113	0.111
12	Sulphate %	0.33	0.35	0.28	0.25	0.25	0.26	0.36	0.40
13	Potassium as K %	0.028	0.031	0.033	0.035	0.041	0.036	0.045	0.048
14	Magnesium as Mg %	0.25	0.27	0.30	0.32	0.33	0.36	0.42	0.40
15	Calcium as Ca%	0.55	0.58	0.68	0.65	0.65	0.65	0.9	0.93
16	Manganese as Mn %	0.44	0.45	0.45	0.48	0.52	0.57	0.33	0.35
17	Iron as Fe%	0.55	0.57	0.60	0.63	0.81	0.91	0.88	0.81
18	Available Organic Carbon %	1.40	1.42	1.25	1.3	2.2	2.40	1.5	1.3
19	Available Nitrogen %	0.084	0.088	0.070	0.076	0.085	0.085	0.088	0.090

5. Soil Quality:

Sampling Location:

S1- Raw Water Pump House

S2- West of ash pond, Bhagipali

S3- Bhurkamunda village

S4- East side of ash pond, Purna

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02976** ***Date: 07.05.2026***

Sl. No.	Parameters	S-5					
		Oct'25	**Nov'25**	**Dec'25**	**Jan'26**	**Feb'26**	**Mar'26**
1	Colour	Brown	Brown	Brown	Brown	Brown	Brown
2	Type of Soil	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
3	pH	7.11	7.25	7.22	7.00	7.12	7.15
4	Texture	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam
5	Infiltration Rate (cm/hr)	7.8	6.5	6.4	8.1	6.6	6.9
6	Bulk Density (gm/cc)	1.88	1.58	1.59	1.6	1.56	1.48
7	Porosity %	40.1	41.5	41.2	40.2	41.4	41.9
8	Moisture content %	11.5	7.5	7.2	11.1	6.9	6.6
9	Fluoride %	0.0036	0.0043	0.0045	0.0039	0.0048	0.0046
10	Silica as SiO2%	33.6	36.9	36.2	34.1	35.9	35
11	Chloride %	0.038	0.044	0.045	0.04	0.042	0.044
12	Sulphate %	0.46	0.46	0.44	0.45	0.48	0.46
13	Potassium as K %	0.048	0.05	0.053	0.042	0.055	0.052
14	Magnesium as Mg %	0.26	0.44	0.42	0.28	0.45	0.42
15	Calcium as Ca %	0.48	0.58	0.56	0.45	0.54	0.55
16	Manganese as Mn %	0.38	0.42	0.45	0.35	0.42	0.4
17	Iron as Fe %	0.54	0.54	0.51	0.58	0.48	0.45
18	Available Organic Carbon %	2.42	2.2	2.15	2.38	2.21	2.15
19	Available Nitrogen %	0.082	0.09	0.093	0.08	0.095	0.098

Soil Quality: Continued.

Sampling Location: S5- Kurebaga Village

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02977** ***Date: 07.05.2026***

Sl. No.	Parameters	S-6					
		Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26
1	Colour	Brown	Brown	Brown	Brown	Brown	Brown
2	Type of Soil	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
3	pH	7.08	7.14	7.15	7.13	7.23	7.28
4	Texture	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam
5	Infiltration Rate (cm/hr)	7.5	6.6	6.8	7.9	6.9	7.1
6	Bulk Density (gm/cc)	1.71	1.44	1.45	1.72	1.42	1.36
7	Porosity %	39.4	41.5	41.4	39.6	41.5	42
8	Moisture content %	9.6	8.6	8.1	9.2	7.7	7.2
9	Fluoride %	0.0045	0.0048	0.0046	0.0048	0.0043	0.0045
10	Silica as SiO2%	36.8	37.2	36.8	37.2	37.4	36.9
11	Chloride %	0.035	0.049	0.052	0.037	0.056	0.059
12	Sulphate %	0.54	0.5	0.51	0.5	0.5	0.52
13	Potassium as K%	0.051	0.043	0.048	0.05	0.046	0.048
14	Magnesium as Mg%	0.3	0.31	0.33	0.32	0.36	0.33
15	Calcium as Ca%	0.56	0.63	0.6	0.52	0.62	0.6
16	Manganese as Mn%	0.42	0.45	0.42	0.4	0.41	0.44
17	Iron as Fe%	0.66	0.59	0.58	0.62	0.59	0.54
18	Available Organic Carbon %	1.69	1.96	1.8	1.74	1.91	1.84
19	Available Nitrogen%	0.075	0.085	0.082	0.078	0.088	0.09

Soil Quality: Continued.

Sampling Location: S6- Siriapali Village

Reviewed By

Approved By

Ref: **Envlab/26-27/TR-02978** ***Date: 07.05.2026***

Sl. No.	Parameters	S-7					
		Oct'25	Nov'25	Dec'25	Jan'26	Feb'26	Mar'26
1	Colour	Brown	Brown	Brown	Brown	Brown	Brown
2	Type of Soil	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
3	pH	6.88	6.9	6.93	6.94	6.88	6.93
4	Texture	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam
5	Infiltration Rate (cm/hr)	7.4	7	7.1	8	7	7.8
6	Bulk Density (gm/cc)	1.63	1.53	1.55	1.6	1.53	1.5
7	Porosity %	42.2	44.9	44.6	41.8	44.2	43.8
8	Moisture content %	10.9	8.1	7.8	10.2	7.5	7
9	Fluoride %	0.0042	0.0051	0.0054	0.0045	0.0052	0.0055
10	Silica as SiO2%	34	37.4	37.8	34.5	38.1	37.8
11	Chloride %	0.041	0.035	0.038	0.044	0.033	0.035
12	Sulphate %	0.43	0.44	0.46	0.42	0.49	0.48
13	Potassium as K%	0.048	0.042	0.045	0.051	0.048	0.045
14	Magnesium as Mg%	0.25	0.35	0.36	0.22	0.35	0.32
15	Calcium as Ca%	0.66	0.51	0.54	0.63	0.55	0.52
16	Manganese as Mn%	0.52	0.41	0.38	0.51	0.33	0.3
17	Iron as Fe%	0.61	0.65	0.62	0.63	0.65	0.62
18	Available Organic Carbon %	1.9	2.3	2.1	1.86	2.14	2.2
19	Available Nitrogen%	0.081	0.079	0.076	0.084	0.079	0.076

Soil Quality: Continued.

Sampling Location: S7 - Katikela Village

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