

Letter No. VAB/ENV/2025-26/22

Date: 27/11/2025

To,
The Director,
Ministry of Environment and Forest,
Regional Office (Southern Zone), Kendriya Sadan,
4th Floor, 17th Main Road, 2nd Block, Koramangala,
Bengaluru, Karnataka- 560034

Subject:

Submission of 2nd six-monthly compliance report to the conditions of Environment Clearance [IA-J-11011/946/2007-IA-II(IND-I)] for M/s Vedanta Limited (Formerly Sesa Goa Ltd.)

Reference:

1. IA-J-11011/946/2007-IA-II(IND-I) dated 18/10/2024

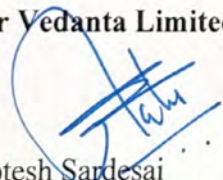
Respected Sir,

With respect to above references, please find enclosed herewith: 2nd six-monthly compliance report to Environment Clearance File No: IA-J-11011/946/2007-IA-II(IND-I) dated 18/10/2024 for the period **April'2025 to September'2025** for M/s Vedanta Limited (Formerly Sesa Goa Ltd.).

Project Name: Proposed expansion in production capacity of Pig Iron Plant from 1 MTPA to 1.2 MTPA by increasing the production capacity of existing BF3 (from 0.65 MTPA to 0.85 MTPA) and sinter plant (from 1 MTPA to 1.2 MTPA) through debottlenecking and Installation of DI pipe Plant from 0.3 MTPA to 0.36 MTPA under clause 7(ii) of EIA Notification 2006 amended from time to time At villages: Amona and Navelim, Taluka: Bicholim, District: North Goa (Goa). The annexures are enclosed along with the compliance status report.

Thanking you.

Yours faithfully

For Vedanta Limited- Value Added Business
Saptesh Sardesai
CEO- Value Added Business

Cc: (i) Member Secretary of GSPCB and (ii) Member Secretary of CPCB (SZO)

VEDANTA LIMITED

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CIN: L13209MH1965PLC291394

Compliance Report to

Environmental Clearance File No: IA-J-11011/946/2007-IA.II(I)

(April'2025-September'25)

Project Name: Proposed expansion in production capacity of Pig Iron Plant from 1 MTPA to 1.2 MTPA by increasing the production capacity of existing BF3 (from 0.65 MTPA to 0.85 MTPA) and sinter plant (from 1 MTPA to 1.2 MTPA) through debottlenecking and Installation of DI pipe Plant from 0.3 MTPA to 0.36 MTPA under clause 7(ii) of EIA Notification 2006 amended from time to time At villages: Amona and Navelim, Taluka: Bicholim, District: North Goa (Goa)..

Sr. no.	Conditions of EC	Compliance status
A. Specific Conditions		
i.	This Environmental clearance is granted subject to outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project. The project proponent shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.	Noted. Complied. All the Environmental Protection Measures are compiled and as a part of the recommendations made in EIA/EMP Installation of ESP with 5 fields in Sinter Plant and Additional 2nos of Silos to Blast furnace 3 Gas cleaning plant are completed
ii.	The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.	Complied. As a part of carbon sequestration, every year plantation is carried out in and around the plant premises during monsoons. FY 25-26 1910 Nos of plantations within plant premises and 700nos along the boundaries and 730nos in the vicinity of wetland were done from June-September'25. Annexure I-Plantation photos
iii.	As reported, Amona is at 0.3 km in WNW direction, Navelim-Maina at a distance of 0.4 km in SE direction of project site along with other sensitive areas within the study area of the project site. Proponent shall take appropriate environmental safeguard measures to minimise the impact on the habitation of the locals. The project proponent needs to strengthen green belt all around the	Complied. As a part of mitigation measures there are windshields along the plant boundaries, windshields with top sprinklers, thick green belt developed inside and along the boundaries also gap filling is done every year in monsoons. As a part of the

	plant area to reduce the dust pollution. The PP shall also include some of these locations in its environmental monitoring programme.	environmental monitoring programme manual AAQM monitoring is carried out weekly twice in Amona, Maina and Navelim village Annexure II: AAQM village monitoring reports
iv.	Mandovi river is reported adjacent to plant site in SW direction, Cudnem River at 0.5 km in NNW direction of project site along with other water bodies within study area of the project site. A robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters: along with Soil conservation scheme and multiple Erosion control measures shall be implemented. The ground water in the vicinity of the rivers must be monitored periodically and reported to the IRO.	Complied Proper drainage systems are available to protect natural drainage and its flow. Excavated Loose soil is dumped separately and covered with geotextile and plantation Pre and post monsoon ground water monitoring is done at Amona, Navelim and Maina village. Annexure III: Pre and post monsoon ground water monitoring reports
v.	The water requirement of 13896 KLD which shall be sourced from Bandhara Valvonti River for fresh water, saline water from Mandovi river, rainwater from harvested pits and PWD water for domestic consumption. PP shall obtain necessary permission from the Competent Authority. No ground water abstraction is permitted.	Complied. Water withdrawal permissions are available. No ground water abstraction is done at the plant Annexure IV: Water withdrawal permissions
vi.	PP shall strictly implement the mitigation measures to minimise the pollution and undertake continuous monitoring of pollutants.	Complied. As a part of mitigation measures we have Bag house systems, Gas cleaning plant, ESP's, Windshields along the plant boundaries, Rain guns, fog cannons, Enclosed conveyors, Tarpaulin tying on trucks top and material heaps, Speed limit to vehicles to avoid fugitive dust during movement, Road sweeping machine, Closed raw material storage shed, thick green belt developed, for continuous monitoring of pollutants there 4nos of CAAQMS stations and stack analyzers are installed and data is continuously getting communicated to GSPCB and CPCB Annexure V: Mitigation measures
vii.	Three tier Green Belt shall be maintained in at least 33% of the project area along the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years.	Complied. Green Belt has been developed within 54 hectares (33.5% of total land) with a density of 2,500 plants per hectare. Further strengthening is done by gap filling every year in monsoons. Green belt is also developed both towards Amona, Navelim village. From June-September'25 1910nos of plantation were done within plant premises ,700nos along the plant boundaries and 730nos in the vicinity of wetland. In addition, wind shields have been installed along the project boundary towards these villages. Annexure VI: Green belt developed along the boundaries and windshield
	a. PP shall also develop greenbelt in the form of shelter belt comprising of total of 6 rows of 2x2 m plantation with a width of 25 meters with tall trees & broad leaves with thick canopy along with windshield inside the plant premises to act as green barrier for air pollution & noise levels towards sensitive areas nearby project site such as Amona Village and Navelim village.	

	b. PP shall practice geotagging of plant for better monitoring. PP shall also try to develop additional plantation in the nearby school in consultation with the school administration. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.	Complied. Geotagging is done in green belt area. Plantation carried out in Amona school in June'25
viii.	The PP is advised to undertake plantation in the earmarked 33% greenbelt area as a part of tree plantation campaign 'Ek Ped Maa Ke Naam' Campaign and the details of the same shall be uploaded on MeriLiFE portal at (https://merilife.nic.in) .	Plantation taken up under 'Ek Ped Maa Ke Naam' Campaign FY 25-26 from June-September'25 and details were uploaded on MeriLiFE portal at (https://merilife.nic.in). Annexure VII: Details of plantation uploaded on MeriLiFE portal
ix.	All the commitments made towards socio-economic development of the nearby villages shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC. PP shall strictly comply with the revised timeline for completion of activities envisaged in the action plan of the earlier PH.	Complied. The proposed activities under the CER are under implementation. Annexure VIII: Details of CER implementation
x.	The project proponent shall undertake village adoption programme and prepare and implement the action plan to develop them into a model village.	Complied. The holistic development of the nearby villages is going on through numerous CSR interventions in the area of Health, Education, Infra. Development, Agri., Water & Sanitation and sustainable livelihood opportunities. Project Gramnirman is already under implementation in nearby villages. MHU vehicle is operational in all nearby villages through Medihelp foundation.
xi.	The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.	Complied Approved wildlife management plan for 5 years received from the State Forest Department, Govt. of Goa, the implementation of the same is in progress. Communications from the Goa Forest department are attached in annexure. As a part of the plan total 67.7lakhs is given to forest department which includes 25 nos. of trap cameras, Sponsorships towards Bird Festival and Wildlife Week celebration, financial support for establishing water holes in wildlife buffer area and Rescue van along with rescue cage was handed over to forest department. Annexure IX: Activities carried out as per approved wildlife management plan
xii.	Top Recovery Turbine shall be installed in BF3. BF 1 & 2 shall be equipped with stove waste recovery, cast house and stock house ventilation system and slag granulation facility. Dry Gas Cleaning Plant shall be installed during next revamping of BF1 and BF2.	Being Complied. Top Recovery Turbine installation at BF3 shall be taken up during revamping. Blast Furnace 1 and Blast Furnace 2 are equipped with stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility. Dry Gas Cleaning Plant installation at BF1,2 shall be taken up during next revamping.

xiii.	AAQ at Mosque and Siddhartha Caves archaeological sites shall be monitored once in a month as per the CPCB norms.	Complied. Ambient air monitoring is being done once a month at Archeological sites i.e the Mosque and Siddhartha Caves at Tar Surla and the reports are submitted monthly to Goa State Pollution Control Board. Annexure X: Archaeological sites monitoring reports
xiv.	Parking area for trucks/dumpers shall be provided within the plant. No truck/dumper shall be parked outside the plant premises	Complied. Parking area for trucks/dumpers is provided inside the plant premises.
xv.	Project proponent shall conserve wetlands located in the vicinity of the project site (Amona – 0.3km in Northern direction and Navelim – 0.6 km in Northern direction) by developing green belt development all along the boundary of the wet land.	Complied.730nos of horticulture plantation done from June-September'25 in the vicinity of Wetland
xvi.	Water being used for cooling purposes in Waste Heat Recovery Power Plant (WHRPP) is the saline water drawn from Mandovi river (backwater). The blow down of cooling towers shall be discharged back to the saline backwaters as per the approval of the GSPCB. Project proponent shall periodically monitor the riverine water quality and report shall be submitted along with the sixmonthly compliance report to the concerned Regional Office of the MoEF&CC.	Complied. River water quality is monitored as per consent, and reports are submitted to GSPCB and CPCB. Annexure XI: River water quality analysis report
xvii.	Secondary emission generated during charging, tapping of metal, slag tapping may be controlled by providing canopy hoods at proper elevation connected to air pollution control device without interfering with the production process.	Complied. At coal charging Dust Extraction Systems (DES) have been provided and baghouses with hoods have been provided at tapping area of metal.
xviii	Additional Filter beds, arrester wall shall be provided along the storm water drainage for settlement of suspended particles and to prevent siltation.	Complied. Filter beds and arrester walls are provided in the storm drains and these storm drains are desilted every year before monsoon.
xix.	The recommendations contained in the storm water management plan shall be strictly adhered with. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.	Complied. The storm water management plan is prepared and implemented. Geo-blanketing of loose soil dump at project site is done as a part of the management plan. Desilting of all the settling ponds and drains is done every year before monsoons.
xx	CO sensors shall be installed in all units which generate CO gas.	Complied.CO gas sensors are installed at all units generating CO gas. There are in total 99nos of portable CO monitors and 120nos of online CO monitors.
xxi	In pursuance to the IA(CMD) communication dated 15.07.2024, the General Condition (v) on energy conservation measures, and General Condition (i) on waste management, as stipulated in EC dated 24.01.2022 shall be deemed dropped for future compliance	Noted.
B. General conditions		

I	Statutory compliance:	
i.	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.	Noted
ii.	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.	Noted
II	Air quality monitoring and preservation:	
i.	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQMS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. (Already being addressed through previous EC conditions.)	Complied. Continuous Emission Monitoring System (CEMS) at the process stacks and CAAQMS have been installed and are connected to Goa State Pollution Control Board (GSPCB) and Central Pollution Control Board (CPCB). Calibration of CEMS and CAAQMS is done as per schedule Annexure XII: Calibration reports
ii.	The project proponent shall carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.(already being addressed through previous EC conditions.)	Complied.4nos of CAAQMS have been installed and data is continuously getting communicated to GSPCB and CPCB.
iii.	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Complied. We are monitoring fugitive emissions at our loading/unloading areas, raw material storage areas and internal roads quarterly through MOEFCC approved laboratory

		Annexure XIII: Fugitive dust emission reports
iv.	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.	Complied. All process stacks have been provided with sampling facilities. Quenching towers are not a source of process emissions and are provided with grit arresters.
v.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Complied. Baghouses, Electrostatic Precipitators (ESPs), Dust Extracting Systems (DESSs), rain guns, fog cannons, windshields, road sweeping machines, water tankers, dry fog systems are present to control air pollution.
vi.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Complied. Differential pressure measurement is available across bags to detect leakage. Compressed Air puffing arrangement is available for mechanized cleaning.
vii.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	Complied. For road cleaning, road sweeping machine is deployed. The shop floor and roofs are cleaned regularly
viii.	Ensure covered transportation and conveying of raw material to prevent spillage and dust generation. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	Complied. All conveyors are closed types to avoid spillages and dust generation. Raw material carrying trucks are covered with tarpaulin during transportation.
ix.	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/agglomeration.	Complied. All the iron ore fines, coal and coke fines, lime fines and such other fines are reused in the sinter plant to produce sinter.
x.	The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces.	Complied. Baghouse systems with hoods are provided to all blast furnaces
xi.	Wind shelter fence and chemical spraying shall be provided on the raw material stockpiles.	Complied. Windshields have been provided at the boundary of the plant. Rain guns are provided in the raw material yard for sprinkling of water to prevent generation of dust.
xii.	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	Complied. Tunnels are not present at our plant. For motor houses and oil storage rooms, proper ventilation system has been provided.

xiii.	Pollution control system in the plant shall be provided as per the CREP Guidelines of CPCB.	Complied. Pollution control system in the plant is present as per CREP guidelines
xiv	The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Enough additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.	Complied. Wet scrubbers, baghouse systems, ESP's, EV vehicles are used for internal employee transportation. Fog cannon mist cannons, rain guns are available in raw material yards and dispatch area. Road spraying through tankers and Road sweeping machine with sprinklers is present and deployed for road cleaning and to arrest suspended dust in atmosphere.
xv	Bag filters shall be cleaned regularly, and efficiency of bag filter system shall be monitored at regular intervals.	Complied. Compressed Air puffing arrangements are available for mechanized cleaning. Differential pressure measurement is available across bags to detect leakage. Efficiency monitoring is conducted annually, and reports are submitted to GSPCB and CPCB.
xvi	Water Sprinklers/Water mist system shall be installed near raw material yards, operational units and other strategic locations to control fugitive emissions from the plant.	Complied. Rain guns and fog cannons are available in raw material yards and dispatch areas. Additionally, road sweeping machines are available for control of fugitive dust emissions
xvii	The particulate matter emissions from the process stacks shall be less than 30 mg/Nm ³ and measures shall be undertaken as per the submitted action plan. Efficient Air monitoring equipment shall be installed.	Complied. Adequate measures like Gas cleaning system, bag houses are available to maintain emissions from stack below 30mg/Nm ³ . Continuous Emission Monitoring System (CEMS) have been installed at the process stacks and are connected to Goa State Pollution Control Board (GSPCB) and Central Pollution Control Board (CPCB). Calibration of CEMS is done as per the schedule.
xviii	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicle shall be used while transport of materials. c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.	Complied. Fog cannons/mist sprinklers are available at raw material storage area. All raw material carrying vehicles are covered with tarpaulin. Wheel wash systems are installed at the exit of raw material gate.
III	Air Quality Monitoring And Preservation In Case Of Ferro Alloy Plants	
i.	The 4th hole extraction system shall be provided in the Sub Merged Arc Furnaces and EAF.	Complied. Furnace is closed with hydraulic operated doors & having 02 no's of extractions holes.

ii.	Industry is going to use silica quartz in large quantities and going to produce Silico Manganese and Ferro Silicon alloy steel. Therefore, it is necessary to control silica/quartz exposures at production Departments, not only emission norms as per Indian Factories Act. The permissible limit for silica/quartz should be within 10 mg/m ³ for total dust as per Indian Factories Act. Therefore, it is recommended to monitor personal and area exposures for silica quartz dust in the process plants.	Complied. Personal and area exposure for silica quartz dust is done at plant
iii.	No Ferro-chrome production shall be carried out without prior Environmental clearance from MOEF&CC.	Noted and complied.
iv.	Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke-(Any further expansion in the coke oven batteries of capacities 0.3MTPA and 0.322MTPA shall not be undertaken until CDQ system is put in place. Further, it also suggested PP to prepare a techno-economically feasible plan for switching over to CDQ, and submit the same to concerned RO MoEFCC clearly indicating the timeline.)	<p>Not applicable.</p> <ul style="list-style-type: none"> Existing two coke oven batteries were built up in the year 1994 and 2013 with capacity 3,22,000 Tons/annum and 3,00,000 tons/annum respectively. The said coke ovens are of non-recovery type coke ovens wherein other material like tar etc are not recovered. The coke ovens are of horizontal assembly of ovens which works with negative pressure. For installing dry quenching plant coke oven battery capacity alone should be at least 5,00,000Tons/annum or more in single row. In our case individual coke oven batteries capacity is far less than 5,00,000Tons/annum. This gives 2,50,000 Tons/annum which is insufficient feed for the dry quenching plant There are two technologies which are available for coke oven namely chemical recovery and waste heat recovery. In case of chemical recovery lots of emission issues persist hence dry quenching is feasible. However, for non recovery type of coke ovens are operated with negative pressure with mandatory waste heat recovery. In case of our existing non recovery type coke ovens the waste heat recovery is at the rate of 500 /tons of coke which is higher than others Dry quenching plant is more feasible in vertical coke ovens. In case of Horizontal coke batteries, the civil structure for quenching tunnel shall be built at particular height which is quite difficult as we have to dug deep below the ground level for this structure. As these existing coke oven batteries are 30 years and 10 years old respectively the space around these coke oven batteries are already occupied by different structures and currently no space available to install any plant around the coke ovens. There is existing wet quenching towers provided with grid arrestor and spray systems

v.	Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries(Chain conveyors, land based industrial vacuum cleaning facility). Land-based APC system shall be installed to control coke pushing emissions.	Complied. Wharf of coke is enclosed with parapet wall on two sides. Feed end is connected to settling pond whereas discharge end on conveyor feeding to screening plant. Coke from wharf is directly taken on conveyor lined with side skirting. Hoods lined with pyro-block modules are provided on hot coke car for control of emissions.
vi.	Monitor CO, HC and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.	Not applicable. Our coke oven batteries are non-recovery type working under negative pressure, hence, there is no Coke Oven Flue Gas (COFG) leakages from coke oven process.
vii.	Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.	Not applicable as our coke oven batteries are non-recovery type
viii.	The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.	Complied. Sulphur content in blended coal is within limits
ix.	Online stack monitoring system for IF and RHF shall be installed, and monitoring report shall be submitted to the concerned Regional Office of the MoEF&CC along with the six monthly compliance report.	Not applicable as there is no IF and RHF
x.	Low NOx Burners will be installed at Reheating Furnace for control of Gaseous emissions generated while using PNG.	Not applicable as there is no reheating furnace at plant
IV	Air Quality Monitoring And Preservation In Case Of Di Pipe	
i.	Ductile Iron (DI) plant shall have the following provisions: a. Bag filter for Zn coating and Mg converter area. b. Wet scrubbers in paint and bitumen coating area. c. Bag Filter in Cement lining area. d. PTFE dipped bags shall be used in the plant. e. PM emissions from BF in Zinc coating area shall be 5 mg/Nm3. f. ETP with recycling facility shall be included, if applicable.	Noted. Currently Not applicable as DI is in construction phase
V	Air Quality Monitoring And Preservation In Case Of Bof	
i.	Basic Oxygen Furnace (BOF) gas shall be cleaned dry	Not applicable as there is no Basic Oxygen Furnace
VI	Water quality monitoring and preservation	

i	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate this system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Complied. Continuous Effluent Monitoring Systems are present at our plant and are connected to GSPCB and CPCB. Calibration of CEMS is done as per schedule from labs recognized under Environment (Protection) Act, 1986
ii.	The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at enough piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.	Complied. Ground water quality is monitored twice a year, Pré-monsoon, and post-monsoon. Ground water quality monitoring was done in the surrounding villages i.e. Amona, Navelim and Maina in the month of May'25(premonsoon) and October'2025 as a part of post monsoon ground water study. Annexure XIV: Pre and Post monsoon ground water quality analysis
iii.	Garland drains and collection pits shall be provided for each stockpile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	Complied. Garland drains and catch ponds have been made along the stock piles to arrest the run-off in the event of heavy rains and water pollution during rainy season
iv.	Water meters shall be provided at the inlet to all unit processes in the steel plants.	Complied. Water meters are installed at the inlet of all the unit processes.
v.	The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	Complied. Process water is recycled and reused. Rain water harvesting is practiced and water is used for process also treated water from STP's is reused for cooling/quenching purpose. No process water is discharged except for blowdown water used for cooling purpose at Waste heat recovery powerplant as per consent authorization.
vi.	The proposed project shall be designed as Zero Liquid Discharge Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic effluent shall be treated in Sewage Treatment Plant. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body	Complied. No process water is discharged except for blowdown water used for cooling purposes of non-contact type condenser at Waste heat recovery powerplant. Sewage treatment plants are present for sewage water treatment also soak pits & septic tanks are present which are cleared regularly through night soil tankers.

vii.	All stockyards shall have impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains and catch pits to trap the runoff material and shall be implemented as per the action plan submitted in EIA/EMP report.	Complied. Rain guns, fog cannons, are available in yard for dust suppression, Garland drains are made along the stock piles and connected to settling ponds to trap the runoff.
viii.	Rainwater harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.	Rainwater harvesting is implemented, and water is used for process. In the FY 25-26 192239m ³ qty was harvested and reused from April-Oct'25
VII	Water Quality Monitoring And Preservation In Case Of Rolling Mills	
i.	The project proponent shall provide the ETP for effluents of rolling mills, if applicable, to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to Coke oven plants) as amended from time to time.	Not applicable. Our coke oven batteries are non-recovery type coke ovens where entire water used for coke quenching is recycled back to process after passing through settling ponds
ii.	Treated water from ETP of COBP shall not be used for coke quenching, if applicable.	Not applicable as there are no rolling mills
VIII	Noise monitoring and prevention	
i.	Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and amendments thereof, and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Complied. Noise monitoring is conducted quarterly, and report is submitted to GSPCB and CPCB.
ii.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during daytime and 70 dB(A) during night time.	Complied. Noise monitoring is conducted quarterly, and report is submitted to GSPCB and CPCB. Annexure XV: Noise monitoring reports
IX	Energy Conservation measures:	
i.	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.	Not applicable. In current operations, metal is getting covered with insulation compound and hot metal is not transferred to longer distances, and it is poured into the pig casting machine. Hence, torpedo ladle is not required
ii.	Restrict Gas flaring to < 1%.	Complied. Gas flaring restricted to <1% shall be implemented, except during Blast Furnace breakdown the flaring can exceed along with Power plant shutdown. Flaring data is also tracked on daily basis so that any issue arising will be tracked and rectified immediately.

iii.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, streetlights, parking around project area and maintain the same regularly;	Complied. Solar power generation system of 100 KW is installed on roof top of admin building also the power utilized for plant operations is generated through Waste Heat Recovery Powerplants. Annexure XVI: Solar power installation
iv.	Provide LED lights in their offices and residential areas.	Complied. LED lights are provided
X	Energy Conservation Measures In Case Of Reheating Furnace	
i.	The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.	Not applicable as there is no reheating furnace
ii.	Practice hot charging of slabs and billets/blooms as far as possible.	Not applicable as there is no reheating furnace
iii.	Coke Dry Quenching (CDQ) shall be provided for coke quenching for both recovery and nonrecovery type coke ovens.	<p>Not applicable.</p> <ul style="list-style-type: none"> Existing two coke oven batteries were built up in the year 1994 and 2013 with capacity 3,22,000 Tons/annum and 3,00,000 tons/annum respectively. The said coke ovens are of non-recovery type coke ovens wherein other material like tar etc are not recovered. The coke ovens are of horizontal assembly of ovens which works with negative pressure. For installing dry quenching plant coke oven battery capacity alone should be at least 5,00,000Tons/annum or more in single row. In our case individual coke oven batteries capacity is far less than 5,00,000Tons/annum. This gives 2,50,000 Tons/annum which is insufficient feed for the dry quenching plant There are two technologies which are available for coke oven namely chemical recovery and waste heat recovery. In case of chemical recovery lots of emission issues persist hence dry quenching is feasible. However, for non recovery type of coke ovens are operated with negative pressure with mandatory waste heat recovery. In case of our existing non recovery type coke ovens the waste heat recovery is at the rate of 500 /tons of coke which is higher than others Dry quenching plant is more feasible in vertical coke ovens. In case of Horizontal coke batteries, the civil structure for quenching tunnel shall be built at particular height which is quite difficult as we have to dug deep below the ground level for this structure. As these existing coke oven batteries are 30 years and 10 years old respectively the space around these coke oven batteries are already occupied by different structures and currently no space available to install any plant around the coke ovens. There is existing wet quenching towers provided with grid arrestor and spray` systems

XI	Waste management	
i.	Kitchen waste shall be composted or converted to biogas for further use.	Complied. Kitchen waste is treated in a composting unit and is recycled for further use
ii.	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.	Not applicable as there is no fly ash generation
iii.	The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at https://cpcb.nic.in/technical-guidelines- 3/ .	Complied. Annexure XVII: Snapshots of SUP free awareness sessions
	a. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six-monthly compliance report being submitted by the project proponents	
iv.	A proper action plan must be implemented to dispose of the electronic waste generated in the industry.	Complied. All e-waste is disposed of through authorized vendors within the timeline as per E waste rules.
v.	Solid waste utilization: a. PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making. b. PP shall recycle/reuse solid waste generated in the plant as far as possible. c. Used refractories shall be recycled as far as possible.	Complied. Crusher is not installed as Slag generated is directly sold to cement plant. All solid waste generated is recycled and reused except for bio medical waste and hazardous waste like paint tins, oil filters, oil-soaked cotton waste and resins which is disposed as per consent. Used refractories are utilized for road making.
XII	Waste Management In Case Of Sinter Plant	

SM S i.	slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.	Not applicable. No SMS slag generated at plant, metallic scrap generated is sold and flux and all other generated dust from dedusting systems is reused in sinter production
ii.	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	Not applicable as Dust generated in GCP is recycled. The same is used as raw material in sinter production
iii.	Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.	Not applicable as Scrap is sold to authorized vendors, flux waste is reused in sinter plant production.
iv.	In case of non-recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery.	Complied. Gas line carrying hot flue gases to the boiler is insulated
v.	Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery type coke ovens).	Not applicable as our coke oven batteries are non-recovery type
XIII	Green Belt	
i.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.	Complied. GHG emissions inventory is prepared for the plant. As a part of GHG reduction program we have commissioned waste heat recovery project for coke drying, installation of free EV charging station at Navelim for employees & community, Biodiesel usage for heating ovens, Reduction in total carbon bearing material in blast furnaces through process optimization and oxygen enrichment, 100KW solar panel installation at admin block, Energy audit at plant and annual plantation program at plant and in surrounding villages

ii.	Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.	Complied. Decarbonization plan has been prepared and is being monitored periodically for implementation. As a part of the plan Waste heat recovery from sinter cooler for coke drying is completed Annexure XVIII: Decarbonization plan
iii.	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	Complied. 33.5% of total land is developed as green belt area Excavated loose soil is dumped separately and covered with geotextile and plantation is carried over the geotextile laid area. All internal roads are black topped
iv.	The PP shall provide additional green belt within the premises of the schools, in consultation with school authorities, within a radius of 1 K.M. from the Plant.	Complied. For FY 25-26 plantation was done Government high school Amona.
XIV	Public Hearing And Human Health Issues	
i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Complied. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan is implemented
ii.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.	Complied. Heat Stress study is part of our hygiene study which is conducted once every two years.

iii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP. Safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Not applicable as there is no housing facility for labours within the plant premises.
iv.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Complied. Occupational health surveillance is done annually
XV	Environment Management	
i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.	Complied. The baseline survey of the areas surrounding the plant was carried out and accordingly the CER activities are planned in the village.
ii.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Complied. The company has a Health, Safety and Environment policy in place. We are ISO14000:2015 certified (Environment Management System). Also, there is a system in place for tracking and reporting of all the statutory compliances
iii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	Complied. Separate Environment cell exists both at project as well as head quarter. Separate budget is allocated towards environmental measures at site

iv.	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEF&CC.	Complied. Efficiency monitoring is conducted annually, and reports are submitted to GSPCB and CPCB. Annexure XIX: Efficiency monitoring reports
XVI	Miscellaneous	
i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Complied. Advertisement regarding grant of EC has been published on two local newspapers The Goan every day and Goan Varta: Environmental Clearance has also been displayed on company's website https://sesagoaironore.com/ under Sustainability section Annexure XX: EC advertisement in newspapers
ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied Annexure XXI: Copies submitted to local bodies
iii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Complied. Six-monthly EC Compliance status report is submitted to MoEF&CC, CPCB & GSPCB. The same is uploaded on company's website https://sesagoaironore.com/ under Sustainability section.
iv.	The project proponent shall monitor the criteria pollutants level namely, PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Complied. Ambient air monitoring and stack emission monitoring is monitored at the plant site and the results are being displayed on the digital display boards installed at our gates. Reports are uploaded on the company website. Annexure XXII: Digital display board
v.	Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be implemented	Complied. All internal and connecting roads are blacktopped in terms of MSA as per IRC guidelines.
vi.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Complied. Status of the compliance of the stipulated environmental conditions is submitted on the website of the Ministry of Environment, Forest and Climate Change.
vii.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as	Complied. Yearly Environmental Statement in Form-V is submitted to the Goa State Pollution Control Board as prescribed under the Environmental (Protection) Rules,

	prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company	1986 and is uploaded on company's website https://sesagoaironore.com/ under Sustainability section
viii.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Noted and compliance ensured
ix.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Noted and compliance ensured
x.	The recommendations of the approved Site-Specific Wildlife Management Plan (in case of involvement of Schedule-I species) shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.	Complied. Approved wildlife management plan for 5 years received from the State Forest Department, Govt. of Goa, the implementation of the same is in progress. As a part of the plan 25 nos. of trap cameras, Sponsorships towards Bird Festival and Wildlife Week celebration, financial support for establishing water holes in wildlife buffer area and Rescue van along with rescue cage was handed over to forest department.
xi.	The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left-over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.	Complied. The details of the community development activities are available on the company website Environment Reports Sesa goa iron ore
xii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Noted and compliance assured.
xiii.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted.
xiv.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted.
xv.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted.

xvi.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Noted. Full co-operation will be extended
xvii.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.

Annexure I
Photographs of plantation.

PLANTATION 25-26

Plantation at the toe of geo textile covered dump



PLANTATION 25-26

Plantation on geotextile covered dumps



PLANTATION 25-26



PLANTATION 25-26



PLANTATION 25-26



Plantation done along the boundaries



PLANTATION 25-26

GAP filling in existing green belt



PLANTATION 25-26

Plantation inward slips

UKMINI GARDNER
 Prop: Nitin V. Parab
 H. No. 456, Arkalam-wada,
 Amara-Goa, Post Marcela-402107
 Landscaping & Gardening M: 9420974688 / 9421248708
 GSTIN: 30ALRPP1035A1Z4 PAN No: ALRPP1035A

To: Vedanta Ltd,
 Navelim Goa

Month: Jun
 Date: 25/06/25

Sub: Issue of Gate Pass for plant

Sir,

Please issue the Gate Pass for plant

1) Bamboo — 400 nos
 Total = 400 Nos

BP No: 4920078108
 Vehicle No: GA 05T 5281

[Stamp: GATE PASS, 25/06/25, 11:20, 11:30, 7:00, 7:00]

For UKMINI GARDNER
 For: Nitin Parab

UKMINI GARDNER
 Prop: Nitin V. Parab
 H. No. 456, Arkalam-wada,
 Amara-Goa, Post Marcela-402107
 Landscaping & Gardening M: 9420974688 / 9421248708
 GSTIN: 30ALRPP1035A1Z4

To: Vedanta Ltd,
 Navelim Goa

Date: 06/06/25

Sub: Issue the Gate Pass for plant

Rs Sir Please Issue the Gate Pass for following Plant

1) Jamun — 20 Nos
 2) KaJu — 20 Nos
 3) Bamboo — 40 Nos
 4) Aila — 20 Nos
 Total = 100

vermicompost — 10 Bag

BP No: 4920078108
 Vehicle No: GA 04T 5327

[Stamp: GATE PASS, 06/06/25, 11:20, 11:30, 7:00, 7:00]

For UKMINI GARDNER
 For: Nitin Parab

UKMINI GARDNER
 Prop: Nitin V. Parab
 H. No. 456, Arkalam-wada,
 Amara-Goa, Post Marcela-402107
 Landscaping & Gardening M: 9420974688 / 9421248708
 GSTIN: 30ALRPP1035A1Z4

To: Vedanta Ltd,
 Amara Goa

Date: 01/06/2025

Sub: Issue the Gate Pass for Plant

Rs Sir Please Issue the Gate Pass for following Plant

1) Totopuri — 25 Nos
 2) Kokam — 50 Nos
 3) Satin — 50 Nos
 4) Banana — 50 Nos
 5) Jackfruit — 25 Nos
 Total = 200

vermicompost — 10 Bag

BP No: 4920078108
 Vehicle No: GA 04T 5327

[Stamp: GATE PASS, 01/06/25, 11:20, 11:30, 7:00, 7:00]

For UKMINI GARDNER
 For: Nitin Parab

UKMINI GARDNER
 Prop: Nitin V. Parab
 H. No. 456, Arkalam-wada,
 Amara-Goa, Post Marcela-402107
 Landscaping & Gardening M: 9420974688 / 9421248708
 GSTIN: 30ALRPP1035A1Z4

To: Vedanta Ltd,
 Amara Goa

Date: 10/06/2025

Sub: Issue the Gate Pass for Plant

Rs Sir Please Issue the Gate Pass for following Plant

1) Totopuri — 25 Nos
 2) Kokam — 50 Nos
 3) Satin — 50 Nos
 4) Banana — 50 Nos
 5) Jackfruit — 25 Nos
 Total = 200

vermicompost — 10 Bag

BP No: 4920078108
 Vehicle No: GA 05T 5281

[Stamp: GATE PASS, 10/06/25, 11:20, 11:30, 7:00, 7:00]

For UKMINI GARDNER
 For: Nitin Parab

Annexure II
AAQM Village Monitoring Reports



|| Shreeji ||

SHREEJI AQUA TREATMENT PVT. LTD.

Innovative Environmental Solutions Under One Roof

Accredited by NABL as per ISO/IEC 17025:2017

Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

• ENVIRONMENT • FOOD • ANIMAL FOOD & FEED • MICROBIOLOGY

Laboratory Recognized by Ministry of Environment, Forest & Climate Change, Govt. of India & NABL Valid Up to 13/06/2026.

Test Report No.	SL/25-26/04/MAA/36ad, 68J, 100AU, 110K, 146U, 173K, 183d, 210P.	T. R. Date	03/05/2025
Customer Name and Address	M/s. VEDANTA LIMITED VALUE ADDITION BUSINESS, AMONAANDNAVELIM, BICHOLIM-GOA.		
Letter Ref/ Date.	Ref. No. 4920077194 dated 08/04/2025		
Sampling Done By	SATPL Representative	Page No.	1of1
Month of Sampling	APRIL - 2025		

SAMPLINGDETAILS - AMBIENTAIRMONITORING: -

Sampling Location	Location-Near Amona Village
Duration of Sampling [Hrs.]	24
Average Ambient Temperature[°C]	34
Average Relative Humidity [%]	64

ANALYSISREPORT:-

Sr. No	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	SL/25-26/04/MAA/36ad	03/04/2025	59.68	27.86	8.46	16.95	12.38	0.33	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
2	SL/25-26/04/MAA/68J	07/04/2025	61.17	29.11	10.42	14.81	8.63	0.38	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
3	SL/25-26/04/MAA/100AU	10/04/2025	55.15	27.03	12.37	12.33	10.67	0.35	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
4	SL/25-26/04/MAA/110K	14/04/2025	60.51	31.60	9.77	20.52	9.83	0.39	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
5	SL/25-26/04/MAA/146U	17/04/2025	64.53	33.27	13.67	13.41	13.54	0.32	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
6	SL/25-26/04/MAA/173K	21/04/2025	58.28	29.52	9.12	17.65	12.61	0.26	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
7	SL/25-26/04/MAA/183d	24/04/2025	57.48	25.37	11.07	20.49	11.52	0.29	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
8	SL/25-26/04/MAA/210P	28/04/2025	61.56	30.77	7.81	10.29	13.49	0.38	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
NAAQS Limits*			100	60	80	80	400	4	1	5	6	20	180	1
Units			µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	mg/m³	µg/m³	µg/m³	ng/m³	ng/m³	µg/m³	ng/m³

*N.A.A.Q.S.-National Ambient Air Quality Standards.

**Annual arithmetic means of minimum 104 measurements in a year at particular site taken twice a week 24 hourly at uniform intervals.

***Hourly Value

EQUIPMENTCALIBRATIONDETAILS

Sr. No.	Equipment Name	Equipment ID	Certificate No.	Calibration Detail	
				Calibrated Date	Calibration Due Date
121122100	Fine Particulate Sampler	SATPL/AR/FPS-01/89/DGM	25031301/05	18.03.2025	17.03.2026
1175R1 1B-DT- 01023	Respirable Dust Sampler	SATPL/AR/RDS-01/88/MM	25031301/04	18.03.2025	17.03.2026
1211-DTC- 2013	Gaseous Attachment Sampler	SATPL/AR/RDS 01-/88/ GSA	25031301/14	18.03.2025	17.03.2026
D307534576	Digital Electronic Balance	SATPL/WT/WL/39	FSC/2503/1801/005	15.03.2025	14.03.2026
NA	Digital Spectrophotometer Model	SATPL/WT/UV/30		Inhouse Calibration	

For Shreeji Aqua Treatment Pvt. Ltd.



—End of Test Report—

SJM
Managing Director
Authorized Signatory

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4, Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

Vadodara: Plot No.1, Shah Ind. Park-1, Vadodara-Savli, Lamdapura. 391 775 Dist. Vadodra

Customer Care No.: +919225247365 Email: info@shreejiagua.com Web: www.shreejiagua.com

Shreeji Aqua is always subject to improvement for better customer satisfaction, we welcome your feedback on pune_lab@shreejiagua.com

• MUMBAI • PUNE • VADODARA

Innovative Environmental Solutions Under One Roof



|| Shreeji ||

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Sampling Done By	SATPL Representative	Page No.	1 of 1
Month of Sampling	APRIL - 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING: -

Sampling Location	Location- Maina Village
Duration of Sampling [Hrs.]	24
Average Ambient Temperature[°C]	34
Average Relative Humidity [%]	64

ANALYSIS REPORT:-

Sr. NO.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO ₂	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	SL/25-26/04/MAA/36ae	03/04/2025	69.21	35.35	11.07	14.18	9.73	0.35	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
2	SL/25-26/04/MAA/68K	07/04/2025	60.42	30.36	7.81	18.70	13.69	0.39	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
3	SL/25-26/04/MAA/100AV	10/04/2025	52.01	26.01	12.37	13.13	11.92	0.34	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
4	SL/25-26/04/MAA/110L	14/04/2025	60.14	29.11	8.46	20.90	14.01	0.25	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
5	SL/25-26/04/MAA/146V	17/04/2025	58.51	27.86	10.42	13.83	12.43	0.39	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
6	SL/25-26/04/MAA/173L	21/04/2025	49.32	23.29	11.72	10.19	8.61	0.31	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
7	SL/25-26/04/MAA/183e	24/04/2025	66.71	30.36	9.12	14.88	13.27	0.27	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
8	SL/25-26/04/MAA/210Q	28/04/2025	58.23	28.28	13.02	18.99	10.56	0.36	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
NAAQS Limits*			100	60	80	80	400	4	1	5	6	20	180	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

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121122100	Fine Particulate Sampler	SATPL/AR/FPS-01/89/DGM	25031301/05	18.03.2025	17.03.2026
1175R1 1B-DT- 01023	Respirable Dust Sampler	SATPL/AR/RDS-01/88/MM	25031301/04	18.03.2025	17.03.2026
1211-DTC- 2013	Gaseous Attachment Sampler	SATPL/AR/RDS 01-/88/ GSA	25031301/14	18.03.2025	17.03.2026
D307534576	Digital Electronic Balance	SATPL/WT/WL/39	FSC/2503/1801/005	15.03.2025	14.03.2026
NA	Digital Spectrophotometer Model	SATPL/WT/LIJ/30		Inhouse Calibration	

For Shreeji Aqua Treatment Pvt. Ltd.



-----End of Test Report-----

SJM
Managing Director
Authorized Signatory

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4, Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

Vadodara: Plot No.1, Shah Ind. Park-1, Vadodara-Savli, Lamdapura. 391 775 Dist. Vadodra

Customer Care No.: +919225247365 Email: info@shreejiaqua.com Web: www.shreejiaqua.com

Shreeji Aqua is always subject to improvement for better customer satisfaction, we welcome your feedback on pune_lab@shreejiaqua.com

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|| Shreeji ||

SHREEJI AQUA TREATMENT PVT. LTD.

Innovative Environmental Solutions Under One Roof

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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

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Laboratory Recognized by Ministry of Environment, Forest & Climate Change, Govt. of India & NABL Valid Up to 13/06/2026.

Test Report No.	SL/25-26/04/MAA/36af, 68L, 100AW, 110M, 146W, 173M, 183f, 210R.	T. R. Date	03/05/2025
Customer Name and Address	M/s. VEDANTA LIMITED VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIM-GOA.		
Letter Ref/Date.	Ref. No. 4920077194 dated 08/04/2025		
Sampling Done By	SATPL Representative	Page No.	1of1
Month of Sampling	APRIL- 2025		

SAMPLING DETAILS – AMBIENT AIR MONITORING: -

Sampling Location	Location- Navelim Village
Duration of Sampling [Hrs.]	24
Average Ambient Temperature[°C]	34
Average Relative Humidity [%]	64

ANALYSIS REPORT:-

Sr. NO.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	SL/25-26/04/MAA/36af	03/04/2025	59.73	28.28	10.42	18.00	12.76	0.38	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
2	SL/25-26/04/MAA/68L	07/04/2025	56.28	26.61	11.72	20.20	14.04	0.35	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
3	SL/25-26/04/MAA/100AW	10/04/2025	61.40	29.52	7.81	13.83	10.57	0.29	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
4	SL/25-26/04/MAA/110M	14/04/2025	51.96	24.53	9.77	11.34	13.52	0.33	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
5	SL/25-26/04/MAA/146W	17/04/2025	63.07	31.19	12.37	17.33	11.84	0.31	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
6	SL/25-26/04/MAA/173M	21/04/2025	53.74	26.20	8.46	15.23	12.23	0.26	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
7	SL/25-26/04/MAA/183f	24/04/2025	61.70	28.69	13.02	17.71	9.37	0.38	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
8	SL/25-26/04/MAA/210R	28/04/2025	54.29	26.61	9.77	15.87	10.29	0.34	<0.01	<0.1	<1.0	<0.5	<20.0	<0.1
NAAQS Limits*			100	60	80	80	400	4	1	5	6	20	180	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

*N.A.A.Q.S.–National Ambient Air Quality Standards.

**Annual arithmetic means of minimum104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

***Hourly Value

EQUIPMENT CALIBRATION DETAILS

Sr. No.	Equipment Name	Equipment ID	Certificate No.	Calibration Detail	
				Calibrated Date	Calibration Due Date
121122100	Fine Particulate Sampler	SATPL/AR/FPS-01/89/DGM	25031301/05	18.03.2025	17.03.2026
1175R1 1B-DT- 01023	Respirable Dust Sampler	SATPL/AR/RDS-01/88/MM	25031301/04	18.03.2025	17.03.2026
1211-DTC- 2013	Gaseous Attachment Sampler	SATPL/AR/RDS 01-/88/ GSA	25031301/14	18.03.2025	17.03.2026
D307534576	Digital Electronic Balance	SATPL/WT/WL/39	FSC/2503/1801/005	15.03.2025	14.03.2026
NA	Digital Spectrophotometer Model	SATPL/WT/WL/30		Inhouse Calibration	

For Shreeji Aqua Treatment Pvt. Ltd.



SJM
Managing Director
Authorized Signatory

-----End of Test Report-----

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4,Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

Vadodara: Plot No.1, Shah Ind. Park-1, Vadodara-Savli, Lamdapura. 391 775 Dist. Vadodra

Customer Care No.: +919225247365 Email: info@shreejiaqua.com Web: www.shreejiaqua.com

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INDUSTRIAL ANALYSTS & CONSULTANTS

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OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/05007, 05023, 05037, 05053, 05067, 05083, 05097, 05113 & 05138.		Test Report Date	03/06/2023
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.			
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025			
Sampling Done By	GLPL	Page No.	1 of 1	
Month of Sampling	MAY – 2025			

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Amona Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	34.4
Average Relative Humidity [%]	65

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/05007	01/05/2025	58.77	29.54	10.25	13.14	<20.0	0.26	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
2	GA/VEN/25/05023	05/05/2025	54.36	27.62	10.05	11.88	<20.0	0.25	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
3	GA/VEN/25/05037	08/05/2025	56.51	28.14	10.15	11.18	<20.0	0.23	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
4	GA/VEN/25/05053	12/05/2025	52.42	24.24	9.85	11.04	<20.0	0.24	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
5	GA/VEN/25/05067	15/05/2025	57.34	28.12	10.15	13.00	<20.0	0.22	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
6	GA/VEN/25/05083	19/05/2025	46.44	23.92	9.65	10.62	<20.0	0.21	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
7	GA/VEN/25/05097	22/05/2025	42.18	21.88	9.15	10.20	<20.0	0.23	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
8	GA/VEN/25/05113	26/05/2025	44.88	22.64	9.35	10.48	<20.0	0.22	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
9	GA/VEN/25/05138	29/05/2025	47.26	23.72	9.75	10.90	<20.0	0.23	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
NAAQS Limits*			100	60	80	80	400	4	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

*N.A.A.Q.S. - National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

Note :

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3. Samples will be preserved for a period 15 days from the delivery of Test Certificate.
4. Test Results relate only to the conditions prevailing at the time of sampling
5. Customer complaint register is available at laboratory.
6. Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.
7. Test methods of analyzed parameters are back side of analysis report.

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	NAAQMS/36/2012-2013 Volume 1
SO ₂	IS 5182 (Part II) 2012
NO ₂	IS 5182 (Part VI) 2012
CO	IS 5182 (Part X) 1999
Lead (Pb)	NAAQMS/36/2012-2013 Volume 1
Ozone (O ₃)	APHA Method 411 3 rd Edition
Ammonia (NH ₃)	APHA Method 401 3 rd Edition
Benzene (C ₆ H ₆)	IS 5182 (Part 11) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part 12):2004
Arsenic (As)	NAAQMS/36/2012-2013 Volume 1
Nickel (Ni)	NAAQMS/36/2012-2013 Volume 1

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2823-DTB-2020	01/02/2025	31/01/2026
2	Fine Particulate Sampler - Sr. No. 934-DTA-2020	01/02/2025	31/01/2025
3	Digital Electronic Balance – Sr. No. GL/IN/Bal-02	29/06/2024	28/06/2025
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/05008, 05024, 05038, 05054, 05068, 05084, 05098, 05114 & 05139.	Test Report Date	03/06/2023
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	MAY – 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Navelim Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	34.4
Average Relative Humidity [%]	65

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/05008	01/05/2025	55.16	27.16	10.15	13.55	<20.0	0.27	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
2	GA/VEN/25/05024	05/05/2025	52.11	25.92	10.05	11.74	<20.0	0.26	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
3	GA/VEN/25/05038	08/05/2025	50.49	26.04	9.85	11.04	<20.0	0.24	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
4	GA/VEN/25/05054	12/05/2025	53.07	26.48	9.95	13.14	<20.0	0.24	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
5	GA/VEN/25/05068	15/05/2025	51.43	24.88	10.15	12.16	<20.0	0.23	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
6	GA/VEN/25/05084	19/05/2025	48.79	23.64	9.75	10.62	<20.0	0.22	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
7	GA/VEN/25/05098	22/05/2025	44.16	22.08	9.35	10.34	<20.0	0.24	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
8	GA/VEN/25/05114	26/05/2025	43.59	22.04	9.25	10.20	<20.0	0.22	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
9	GA/VEN/25/05139	29/05/2025	46.88	23.18	9.65	10.76	<20.0	0.25	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
NAAQS Limits*			100	60	80	80	400	4	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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4. Test Results relate only to the conditions prevailing at the time of sampling
5. Customer complaint register is available at laboratory.
6. Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.
7. Test methods of analyzed parameters are back side of analysis report.

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	NAAQMS/36/2012-2013 Volume 1
SO ₂	IS 5182 (Part II) 2012
NO ₂	IS 5182 (Part VI) 2012
CO	IS 5182 (Part X) 1999
Lead (Pb)	NAAQMS/36/2012-2013 Volume 1
Ozone (O ₃)	APHA Method 411 3 rd Edition
Ammonia (NH ₃)	APHA Method 401 3 rd Edition
Benzene (C ₆ H ₆)	IS 5182 (Part 11) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part 12):2004
Arsenic (As)	NAAQMS/36/2012-2013 Volume 1
Nickel (Ni)	NAAQMS/36/2012-2013 Volume 1

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2831-DTB-2020	02/02/2025	01/02/2026
2	Fine Particulate Sampler - Sr. No. 1341-G-23	17/09/2024	16/09/2025
3	Digital Electronic Balance – Sr. No. GL/IN/Bal-02	29/06/2024	28/06/2025
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/05009, 05025, 05039, 05055, 05069, 05085, 05099, 05115 & 05140.	Test Report Date	03/06/2023
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIM - GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	MAY - 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Maina Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	34.4
Average Relative Humidity [%]	65

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/05009	01/05/2025	54.17	25.92	10.25	13.27	<20.0	0.28	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
2	GA/VEN/25/05025	05/05/2025	51.08	25.78	10.15	11.88	<20.0	0.26	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
3	GA/VEN/25/05039	08/05/2025	49.56	24.96	9.95	11.18	<20.0	0.25	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
4	GA/VEN/25/05055	12/05/2025	52.66	25.64	9.65	13.00	<20.0	0.24	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
5	GA/VEN/25/05069	15/05/2025	48.55	25.16	9.55	12.30	<20.0	0.24	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
6	GA/VEN/25/05085	19/05/2025	43.51	22.88	9.25	10.76	<20.0	0.23	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
7	GA/VEN/25/05099	22/05/2025	44.89	22.98	9.35	10.48	<20.0	0.23	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
8	GA/VEN/25/05115	26/05/2025	42.06	21.84	9.05	10.34	<20.0	0.23	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
9	GA/VEN/25/05140	29/05/2025	45.77	22.78	9.55	11.18	<20.0	0.25	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
NAAQS Limits*			100	60	80	80	400	4	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

*N.A.A.Q.S. - National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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6. Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.
7. Test methods of analyzed parameters are back side of analysis report.

CHECKED BY

Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	NAAQMS/36/2012-2013 Volume 1
SO ₂	IS 5182 (Part II) 2012
NO ₂	IS 5182 (Part VI) 2012
CO	IS 5182 (Part X) 1999
Lead (Pb)	NAAQMS/36/2012-2013 Volume 1
Ozone (O ₃)	APHA Method 411 3 rd Edition
Ammonia (NH ₃)	APHA Method 401 3 rd Edition
Benzene (C ₆ H ₆)	IS 5182 (Part 11) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part 12):2004
Arsenic (As)	NAAQMS/36/2012-2013 Volume 1
Nickel (Ni)	NAAQMS/36/2012-2013 Volume 1

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2822-DTB-2020	01/02/2025	31/01/2026
2	Fine Particulate Sampler - Sr. No. 1359-J-23	18/12/2024	17/12/2025
3	Digital Electronic Balance – Sr. No. GL/IN/Bal-02	29/06/2024	28/06/2025
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.

Tel. : (02362) 223519 • E-mail : info@gadark.in • Website : www.gadark.in

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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/06007, 06021, 06037, 06051, 06067, 06081, 06099, 06113, 06130.	Test Report Date	04/07/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	JUNE– 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Amona Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	29
Average Relative Humidity [%]	87

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/06007	02/06/2025	43.66	20.34	8.74	9.36	<20.0	0.28	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
2	GA/VEN/25/06021	05/06/2025	46.92	21.48	8.54	9.78	<20.0	0.27	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
3	GA/VEN/25/06037	09/06/2025	48.33	21.59	8.54	9.50	<20.0	0.26	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
4	GA/VEN/25/06051	12/06/2025	35.71	17.53	8.14	10.20	<20.0	0.27	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
5	GA/VEN/25/06067	16/06/2025	39.54	19.54	8.44	9.78	<20.0	0.30	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
6	GA/VEN/25/06081	19/06/2025	44.21	21.36	8.34	10.34	<20.0	0.28	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
7	GA/VEN/25/06099	23/06/2025	36.13	17.53	8.94	9.22	<20.0	0.29	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
8	GA/VEN/25/06113	26/06/2025	43.25	20.86	8.74	10.06	<20.0	0.31	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
9	GA/VEN/25/06130	30/06/2025	40.15	19.62	8.34	9.81	<20.0	0.27	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
NAAQS Limits*			100	60	80	80	400	4	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³


*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.


AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

Note :

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3. Samples will be preserved for a period 15 days from the delivery of Test Report.
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5. Customer complaint register is available at laboratory.
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7. Test methods of analyzed parameters are back side of analysis report.


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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	NAAQMS/36/2012-2013 Volume 1
SO ₂	IS 5182 (Part II) 2012
NO ₂	IS 5182 (Part VI) 2012
CO	IS 5182 (Part X) 1999
Lead (Pb)	NAAQMS/36/2012-2013 Volume 1
Ozone (O ₃)	APHA Method 411 3 rd Edition
Ammonia (NH ₃)	APHA Method 401 3 rd Edition
Benzene (C ₆ H ₆)	IS 5182 (Part 11) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part 12):2004
Arsenic (As)	NAAQMS/36/2012-2013 Volume 1
Nickel (Ni)	NAAQMS/36/2012-2013 Volume 1

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2823-DTB-2020	01/02/2025	31/01/2026
2	Fine Particulate Sampler - Sr. No. 934-DTA-2020	01/02/2025	31/01/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/06008, 06022, 06038, 06052, 06068, 06082, 06100, 0611, 06131.	Test Report Date	04/07/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	JUNE – 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Navelim Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	29
Average Relative Humidity [%]	87

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/06008	02/06/2025	41.55	18.95	8.44	9.64	<20.0	0.27	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
2	GA/VEN/25/06022	05/06/2025	43.08	19.57	8.94	10.20	<20.0	0.26	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
3	GA/VEN/25/06038	09/06/2025	44.88	20.56	8.74	10.20	<20.0	0.28	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
4	GA/VEN/25/06052	12/06/2025	36.96	17.19	8.64	10.06	<20.0	0.29	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
5	GA/VEN/25/06068	16/06/2025	41.65	18.66	8.84	9.50	<20.0	0.27	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
6	GA/VEN/25/06082	19/06/2025	42.66	20.77	8.94	10.20	<20.0	0.27	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
7	GA/VEN/25/06100	23/06/2025	37.98	17.66	8.64	9.36	<20.0	0.29	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
8	GA/VEN/25/06114	27/06/2025	41.68	19.88	8.94	10.34	<20.0	0.31	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
9	GA/VEN/25/06131	30/06/2025	39.61	19.57	8.64	9.97	<20.0	0.32	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
NAAQS Limits*			100	60	80	80	400	4	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.

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AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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7. Test methods of analyzed parameters are back side of analysis report.

K. S. Bagayotke

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	NAAQMS/36/2012-2013 Volume 1
SO ₂	IS 5182 (Part II) 2012
NO ₂	IS 5182 (Part VI) 2012
CO	IS 5182 (Part X) 1999
Lead (Pb)	NAAQMS/36/2012-2013 Volume 1
Ozone (O ₃)	APHA Method 411 3 rd Edition
Ammonia (NH ₃)	APHA Method 401 3 rd Edition
Benzene (C ₆ H ₆)	IS 5182 (Part 11) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part 12):2004
Arsenic (As)	NAAQMS/36/2012-2013 Volume 1
Nickel (Ni)	NAAQMS/36/2012-2013 Volume 1

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1.	Respirable Dust Sample - Sr. No. 2831-DTB-2020	02/02/2025	01/02/2026
2	Fine Particulate Sampler - Sr. No. 1341-G-23	17/09/2024	16/09/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, iD No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/06009, 06023, 06039, 06053, 06069, 06083, 06101, 06115, 06132	Test Report Date	04/07/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	JUNE – 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Maina Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	29
Average Relative Humidity [%]	87

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/06009	02/06/2025	42.35	20.12	8.34	9.87	<20.0	0.25	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
2	GA/VEN/25/06023	05/06/2025	45.63	20.49	8.94	10.06	<20.0	0.27	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
3	GA/VEN/25/06039	09/06/2025	46.28	21.34	8.44	10.06	<20.0	0.27	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
4	GA/VEN/25/06053	12/06/2025	36.18	18.14	8.54	10.20	<20.0	0.27	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
5	GA/VEN/25/06069	16/06/2025	38.42	17.69	8.94	9.78	<20.0	0.26	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
6	GA/VEN/25/06083	19/06/2025	42.11	19.55	8.64	9.92	<20.0	0.26	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
7	GA/VEN/25/06101	23/06/2025	37.48	18.34	8.74	9.64	<20.0	0.32	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
8	GA/VEN/25/06115	27/06/2025	42.95	20.34	9.05	10.20	<20.0	0.28	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
9	GA/VEN/25/06132	30/06/2025	39.63	18.56	8.94	9.65	<20.0	0.29	<0.1	<1.0	<5.0	<5.0	<20.0	<0.2
NAAQS Limits*			100	60	80	80	400	4	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³


*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.


AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	NAAQMS/36/2012-2013 Volume 1
SO ₂	IS 5182 (Part II) 2012
NO ₂	IS 5182 (Part VI) 2012
CO	IS 5182 (Part X) 1999
Lead (Pb)	NAAQMS/36/2012-2013 Volume 1
Ozone (O ₃)	APHA Method 411 3 rd Edition
Ammonia (NH ₃)	APHA Method 401 3 rd Edition
Benzene (C ₆ H ₆)	IS 5182 (Part 11) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part 12):2004
Arsenic (As)	NAAQMS/36/2012-2013 Volume 1
Nickel (Ni)	NAAQMS/36/2012-2013 Volume 1

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2822-DTB-2020	01/02/2025	31/01/2026
2	Fine Particulate Sampler - Sr. No. 1359-J-23	18/12/2024	17/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0704,0720,0734,0750,0769,0786,07102,07118,07137	Test Report Date	04/08/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	JULY– 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Amona Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	91

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/0704	03/07/2025	38.66	17.25	8.54	10.79	15.80	0.30	0.04	<1.0	<0.4	2.49	9.49	<0.1
2	GA/VEN/25/0720	07/07/2025	40.51	18.53	8.84	10.30	16.07	0.31	0.06	<1.0	<0.4	3.61	9.61	<0.1
3	GA/VEN/25/0734	10/07/2025	43.27	17.21	9.05	10.63	16.61	0.29	0.02	<1.0	<0.4	2.49	9.19	<0.1
4	GA/VEN/25/0750	14/07/2025	42.21	18.23	8.94	10.95	15.39	0.30	0.04	<1.0	<0.4	3.61	9.78	<0.1
5	GA/VEN/25/0769	17/07/2025	38.74	16.72	8.34	9.81	16.61	0.27	0.05	<1.0	<0.4	0.87	9.70	<0.1
6	GA/VEN/25/0786	21/07/2025	35.27	15.46	8.64	10.30	16.34	0.30	0.04	<1.0	<0.4	4.35	9.34	<0.1
7	GA/VEN/25/07102	24/07/2025	38.30	17.16	8.74	10.79	16.61	0.29	0.02	<1.0	<0.4	1.87	9.07	<0.1
8	GA/VEN/25/07118	28/07/2025	43.44	15.38	9.25	10.95	16.20	0.29	0.04	<1.0	<0.4	2.61	10.04	<0.1
9	GA/VEN/25/07137	31/07/2025	41.54	16.24	9.15	11.12	15.93	0.34	0.03	<1.0	<0.4	3.86	9.53	<0.1
NAAQS Limits*			100	60	80	80	400	2	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³


*N.A.A.Q.S. – National Ambient Air Quality Standards.

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*** Hourly Value

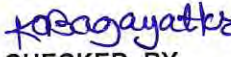
End

For GADARKLAB PVT. LTD.


AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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7. Test methods of analyzed parameters are back side of analysis report.


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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	IS 5182 (Part XXIII) 2006
PM _{2.5}	IS 5182 (Part XXIV) 2019
SO ₂	IS 5182 (Part II) 2001
NO ₂	IS 5182 (Part VI) 2006
CO	IS 5182 (Part X) 1999
Lead (Pb)	IS 5182 (Part XXII) 2004
Ozone (O ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 411 2016
Ammonia (NH ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 401 2016
Benzene (C ₆ H ₆)	IS 5182 (Part XI) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part XII):2004
Arsenic (As)	IS 5182 (Part XXII):2004
Nickel (Ni)	IS 5182 (Part XXI):2020

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2823-DTB-2020	01/02/2025	31/01/2026
2	Fine Particulate Sampler - Sr. No. 934-DTA-2020	01/02/2025	31/01/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



GADARK LAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0709,0724,0739,0754,0774, 0790,07107,07122,07142	Test Report Date	04/08/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	JULY – 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Maina Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	91

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/0709	03/07/2025	35.30	15.71	8.94	10.63	15.93	0.30	0.05	<1.0	<0.4	1.24	9.66	<0.1
2	GA/VEN/25/0724	07/07/2025	39.58	17.83	8.74	11.22	15.52	0.31	0.04	<1.0	<0.4	2.61	10.42	<0.1
3	GA/VEN/25/0739	10/07/2025	38.81	16.55	8.34	10.79	15.11	0.29	0.05	<1.0	<0.4	2.99	10.17	<0.1
4	GA/VEN/25/0754	14/07/2025	40.42	16.28	9.05	10.63	15.93	0.30	0.07	<1.0	<0.4	2.99	9.56	<0.1
5	GA/VEN/25/0774	17/07/2025	37.60	16.54	8.64	9.65	17.16	0.25	0.05	<1.0	<0.4	2.39	9.29	<0.1
6	GA/VEN/25/0790	21/07/2025	35.45	15.58	8.84	10.30	16.88	0.29	0.04	<1.0	<0.4	2.61	9.36	<0.1
7	GA/VEN/25/07107	24/07/2025	33.16	14.74	8.54	11.28	17.16	0.28	0.03	<1.0	<0.4	2.36	9.41	<0.1
8	GA/VEN/25/07122	28/07/2025	40.36	16.97	8.44	10.95	16.75	0.30	0.03	<1.0	<0.4	3.73	9.78	<0.1
9	GA/VEN/25/07142	31/07/2025	37.62	14.85	8.74	11.12	16.34	0.35	0.04	<1.0	<0.4	8.96	10.04	<0.1
NAAQS Limits*			100	60	80	80	400	2	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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6. Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.
7. Test methods of analyzed parameters are back side of analysis report.

CHECKED BY

Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	IS 5182 (Part XXIII) 2006
PM _{2.5}	IS 5182 (Part XXIV) 2019
SO ₂	IS 5182 (Part II) 2001
NO ₂	IS 5182 (Part VI) 2006
CO	IS 5182 (Part X) 1999
Lead (Pb)	IS 5182 (Part XXII) 2004
Ozone (O ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 411 2016
Ammonia (NH ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 401 2016
Benzene (C ₆ H ₆)	IS 5182 (Part XI) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part XII):2004
Arsenic (As)	IS 5182 (Part XXII):2004
Nickel (Ni)	IS 5182 (Part XXI):2020

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2822-DTB-2020	01/02/2025	31/01/2026
2	Fine Particulate Sampler - Sr. No. 1359-J-23	18/12/2024	17/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0708,0723,0738,0753,0773, 0789,07106,07121,07141	Test Report Date	04/08/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM - GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	JULY - 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Navelim Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	91

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/0708	03/07/2025	37.63	16.85	9.05	10.46	16.61	0.31	0.01	<1.0	<0.4	2.36	9.92	<0.1
2	GA/VEN/25/0723	07/07/2025	38.49	17.25	8.94	10.14	16.88	0.32	0.05	<1.0	<0.4	3.73	9.95	<0.1
3	GA/VEN/25/0738	10/07/2025	40.52	16.68	8.84	10.46	17.02	0.31	0.05	<1.0	<0.4	2.11	9.31	<0.1
4	GA/VEN/25/0753	14/07/2025	41.69	17.65	8.74	10.30	16.07	0.30	0.06	<1.0	<0.4	3.48	9.78	<0.1
5	GA/VEN/25/0773	17/07/2025	35.21	16.21	8.64	9.97	15.80	0.26	0.04	<1.0	<0.4	1.60	9.60	<0.1
6	GA/VEN/25/0789	21/07/2025	37.95	15.98	8.44	10.63	16.20	0.31	0.02	<1.0	<0.4	3.11	9.24	<0.1
7	GA/VEN/25/07106	24/07/2025	35.16	15.08	8.14	11.13	16.48	0.32	0.05	<1.0	<0.4	1.74	8.85	<0.1
8	GA/VEN/25/07121	28/07/2025	39.63	15.04	8.24	11.12	16.34	0.28	0.04	<1.0	<0.4	2.49	9.36	<0.1
9	GA/VEN/25/07141	31/07/2025	38.62	15.34	8.34	11.28	16.07	0.30	0.04	<1.0	<0.4	4.10	9.51	<0.1
NAAQS Limits*			100	60	80	80	400	2	1	5	6	20	100	1
Units			µg/ m ³	µg/ m ³	µg/ m ³	µg/ m ³	µg/ m ³	mg/ m ³	µg/ m ³	µg/ m ³	ng/ m ³	ng/ m ³	µg/ m ³	ng/ m ³


*N.A.A.Q.S. - National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.


AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	IS 5182 (Part XXIII) 2006
PM _{2.5}	IS 5182 (Part XXIV) 2019
SO ₂	IS 5182 (Part II) 2001
NO ₂	IS 5182 (Part VI) 2006
CO	IS 5182 (Part X) 1999
Lead (Pb)	IS 5182 (Part XXII) 2004
Ozone (O ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 411 2016
Ammonia (NH ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 401 2016
Benzene (C ₆ H ₆)	IS 5182 (Part XI) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part XII):2004
Arsenic (As)	IS 5182 (Part XXII):2004
Nickel (Ni)	IS 5182 (Part XXI):2020

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2831-DTB-2020	02/02/2025	01/02/2026
2	Fine Particulate Sampler - Sr. No. 1341-G-23	17/09/2024	16/09/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0804,0823,0849,0863,0879,0896, 0913, 0927	Test Report Date	02/09/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM,BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	AUGUST– 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Amona Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	92

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/0804	04/08/2025	43.76	18.72	9.80	10.42	15.39	0.77	0.02	<1.0	<0.4	2.24	9.10	<0.1
2	GA/VEN/25/0823	07/08/2025	42.51	18.83	10.14	11.56	15.66	0.70	0.03	<1.0	<0.4	1.37	9.36	<0.1
3	GA/VEN/25/0849	12/08/2025	38.66	17.39	9.92	11.05	14.98	0.67	0.02	<1.0	<0.4	2.11	9.85	<0.1
4	GA/VEN/25/0863	14/08/2025	41.49	17.42	9.69	11.43	15.25	0.71	0.02	<1.0	<0.4	0.87	9.70	<0.1
5	GA/VEN/25/0879	18/08/2025	39.26	17.65	10.03	11.69	14.84	0.65	0.03	<1.0	<0.4	1.62	9.22	<0.1
6	GA/VEN/25/0896	21/08/2025	42.56	20.49	10.25	11.18	15.39	0.68	0.03	<1.0	<0.4	2.61	9.66	<0.1
7	GA/VEN/25/0913	25/08/2025	36.56	17.92	9.92	10.92	14.84	0.29	0.02	<1.0	<0.4	1.62	9.18	<0.1
8	GA/VEN/25/0927	28/08/2025	39.40	17.89	9.79	11.18	14.44	0.83	0.06	<1.0	<0.4	1.74	9.20	<0.1
NAAQS Limits*			100	60	80	80	400	2	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	IS 5182 (Part XXIII) 2006
PM _{2.5}	IS 5182 (Part XXIV) 2019
SO ₂	IS 5182 (Part II) 2001
NO ₂	IS 5182 (Part VI) 2006
CO	IS 5182 (Part X) 1999
Lead (Pb)	IS 5182 (Part XXII) 2004
Ozone (O ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 411 2016
Ammonia (NH ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 401 2016
Benzene (C ₆ H ₆)	IS 5182 (Part XI) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part XII):2004
Arsenic (As)	IS 5182 (Part XXII):2004
Nickel (Ni)	IS 5182 (Part XXI):2020

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2823-DTB-2020	01/02/2025	31/01/2026
2	Fine Particulate Sampler - Sr. No. 1327-F-23	18/09/2025	17/09/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	04/08/2025	03/11/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0807,0827,0852,0867,0882,0900,0916,0931	Test Report Date	02/09/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	AUGUST – 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Navelim Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	92

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/0807	04/08/2025	40.88	15.34	9.47	11.18	14.84	0.75	0.01	<1.0	<0.4	1.74	9.42	<0.1
2	GA/VEN/25/0827	07/08/2025	41.49	19.24	10.47	11.69	15.52	0.80	0.03	<1.0	<0.4	2.24	9.65	<0.1
3	GA/VEN/25/0852	12/08/2025	37.47	17.12	10.25	10.80	14.71	0.68	0.05	<1.0	<0.4	1.37	9.85	<0.1
4	GA/VEN/25/0867	14/08/2025	39.12	17.05	9.80	10.42	15.25	0.70	0.06	<1.0	<0.4	1.74	9.30	<0.1
5	GA/VEN/25/0882	18/08/2025	35.15	15.69	10.14	10.92	14.84	0.67	0.04	<1.0	<0.4	2.49	9.57	<0.1
6	GA/VEN/25/0900	21/08/2025	39.43	19.07	10.47	11.05	15.11	0.63	0.03	<1.0	<0.4	2.24	9.66	<0.1
7	GA/VEN/25/0916	25/08/2025	37.27	18.61	10.03	10.80	13.89	0.93	0.01	<1.0	<0.4	1.49	8.91	<0.1
8	GA/VEN/25/0931	28/08/2025	42.40	20.66	10.48	11.18	13.86	0.86	0.04	<1.0	<0.4	3.73	8.90	<0.1
NAAQS Limits*			100	60	80	80	400	2	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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7. Test methods of analyzed parameters are back side of analysis report.

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	IS 5182 (Part XXIII) 2006
PM _{2.5}	IS 5182 (Part XXIV) 2019
SO ₂	IS 5182 (Part II) 2001
NO ₂	IS 5182 (Part VI) 2006
CO	IS 5182 (Part X) 1999
Lead (Pb)	IS 5182 (Part XXII) 2004
Ozone (O ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 411 2016
Ammonia (NH ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 401 2016
Benzene (C ₆ H ₆)	IS 5182 (Part XI) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part XII):2004
Arsenic (As)	IS 5182 (Part XXII):2004
Nickel (Ni)	IS 5182 (Part XXI):2020

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2831-DTB-2020	02/02/2025	01/02/2026
2	Fine Particulate Sampler - Sr. No. 1341-G-23	17/09/2024	16/09/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	04/08/2025	03/11/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0808,0828,0853,0868,0883, 0901, 0917, 0932	Test Report Date	02/09/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	AUGUST – 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Maina Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	92

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/0808	04/08/2025	42.61	17.22	9.14	10.42	15.52	0.67	0.04	<1.0	<0.4	1.87	9.09	<0.1
2	GA/VEN/25/0828	07/08/2025	38.15	17.53	10.03	11.43	15.11	0.73	0.04	<1.0	<0.4	2.49	9.67	<0.1
3	GA/VEN/25/0853	12/08/2025	35.61	16.79	10.36	11.05	14.84	0.72	0.04	<1.0	<0.4	1.49	9.89	<0.1
4	GA/VEN/25/0868	14/08/2025	37.78	16.58	10.14	10.80	13.89	0.77	0.05	<1.0	<0.4	2.99	9.62	<0.1
5	GA/VEN/25/0883	18/08/2025	41.67	18.35	10.80	11.18	14.16	0.62	0.06	<1.0	<0.4	3.23	9.59	<0.1
6	GA/VEN/25/0901	21/08/2025	37.62	18.88	10.03	11.31	16.88	0.73	0.03	<1.0	<0.4	1.74	9.41	<0.1
7	GA/VEN/25/0917	25/08/2025	35.97	16.64	9.69	11.05	13.75	0.88	0.02	<1.0	<0.4	2.11	9.04	<0.1
8	GA/VEN/25/0932	28/08/2025	40.54	18.43	9.90	11.31	14.59	0.87	0.04	<1.0	<0.4	3.11	9.10	<0.1
NAAQS Limits*			100	60	80	80	400	2	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARKLAB PVT. LTD.

Jagannath S. Parab

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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7. Test methods of analyzed parameters are back side of analysis report.

Jagannath S. Parab
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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	IS 5182 (Part XXIII) 2006
PM _{2.5}	IS 5182 (Part XXIV) 2019
SO ₂	IS 5182 (Part II) 2001
NO ₂	IS 5182 (Part VI) 2006
CO	IS 5182 (Part X) 1999
Lead (Pb)	IS 5182 (Part XXII) 2004
Ozone (O ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 411 2016
Ammonia (NH ₃)	ISC Method of Air Sampling & Analysis 3 rd Edition Method 401 2016
Benzene (C ₆ H ₆)	IS 5182 (Part XI) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part XII):2004
Arsenic (As)	IS 5182 (Part XXII):2004
Nickel (Ni)	IS 5182 (Part XXI):2020

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2822-DTB-2020	01/02/2025	31/01/2026
2	Fine Particulate Sampler - Sr. No. 1359-J-23	18/12/2024	17/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	04/08/2025	03/11/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0948, 0962, 0978, 0992, 1008, 1025, 1041, 1055, 1071	Test Report Date	03/10/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	SEPTEMBER– 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Amona Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	90

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/0948	01/09/2025	43.87	20.86	< 20	12.07	< 20	0.92	0.05	<1.0	<0.4	2.73	< 20	< 0.5
2	GA/VEN/25/0962	04/09/2025	40.31	18.58	< 20	12.32	< 20	0.73	0.06	<1.0	<0.4	1.37	< 20	< 0.5
3	GA/VEN/25/0978	08/09/2025	42.52	19.57	< 20	11.69	< 20	0.85	0.02	<1.0	<0.4	3.99	< 20	< 0.5
4	GA/VEN/25/0992	11/09/2025	39.78	17.82	< 20	12.32	< 20	0.78	0.03	<1.0	<0.4	0.75	< 20	< 0.5
5	GA/VEN/25/1008	15/09/2025	41.57	20.02	< 20	12.83	< 20	0.88	0.06	<1.0	<0.4	1.24	< 20	< 0.5
6	GA/VEN/25/1025	18/09/2025	38.76	18.39	< 20	13.34	< 20	0.76	0.02	<1.0	<0.4	2.00	< 20	< 0.5
7	GA/VEN/25/1041	22/09/2025	43.32	19.71	< 20	13.59	< 20	0.76	0.05	<1.0	<0.4	3.40	< 20	< 0.5
8	GA/VEN/25/1055	25/09/2025	41.13	20.37	< 20	13.91	< 20	0.91	0.02	<1.0	<0.4	2.37	< 20	< 0.5
9	GA/VEN/25/1071	29/09/2025	44.28	21.25	< 20	13.64	< 20	0.87	0.04	<1.0	<0.4	3.61	< 20	< 0.5
NAAQS Limits*			100	60	80	80	< 20	2	< 20	5	6	<1.0	<0.4	1
Units			µg/ m ³	µg/ m ³	µg/ m ³	µg/ m ³	µg/ m ³	mg/ m ³	µg/ m ³	µg/ m ³	ng/ m ³	ng/ m ³	µg/ m ³	ng/ m ³

*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	IS 5182 (Part XXIII) 2006
PM _{2.5}	IS 5182 (Part XXIV) 2019
SO ₂	IS 5182 (Part II) 2001
NO ₂	IS 5182 (Part VI) 2006
CO	IS 5182 (Part X) 1999
Lead (Pb)	IS 5182 (Part XXII) 2004
Ozone (O ₃)	IS 5182 (Part IX) 2019
Ammonia (NH ₃)	IS 5182 (Part XXV) 2018
Benzene (C ₆ H ₆)	IS 5182 (Part XI) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part XII):2004
Arsenic (As)	IS 5182 (Part XXII):2004
Nickel (Ni)	IS 5182 (Part XXI):2020

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2823-DTB-2020	01/02/2025	31/01/2026
2	Fine Particulate Sampler - Sr. No. 1327-F-23	18/09/2025	17/09/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	04/08/2025	03/11/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0952, 0967, 0982, 0996, 1012, 1030, 1045, 1060, 1075	Test Report Date	03/10/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	SEPTEMBER – 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Maina Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	90

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/0952	01/09/2025	42.64	20.73	< 20	12.45	< 20	0.70	0.03	<1.0	<0.4	2.61	< 20	< 0.5
2	GA/VEN/25/0967	04/09/2005	42.38	19.75	< 20	12.70	< 20	0.99	0.03	<1.0	<0.4	2.12	< 20	< 0.5
3	GA/VEN/25/0982	08/09/2025	37.88	17.59	< 20	12.83	< 20	0.83	0.07	<1.0	<0.4	1.87	< 20	< 0.5
4	GA/VEN/25/0996	11/09/2025	36.29	16.94	< 20	13.21	< 20	0.77	< 0.01	<1.0	<0.4	2.49	< 20	< 0.5
5	GA/VEN/25/1012	15/09/2025	38.44	16.42	< 20	12.96	< 20	0.78	0.04	<1.0	<0.4	1.62	< 20	< 0.5
6	GA/VEN/25/1030	18/09/2025	41.69	20.66	< 20	13.47	< 20	0.83	0.01	<1.0	<0.4	2.61	< 20	< 0.5
7	GA/VEN/25/1045	22/09/2025	37.39	17.26	< 20	13.21	< 20	0.85	0.01	<1.0	<0.4	1.49	< 20	< 0.5
8	GA/VEN/25/1060	25/09/2025	40.24	18.77	< 20	13.64	< 20	0.91	0.03	<1.0	<0.4	3.23	< 20	< 0.5
9	GA/VEN/25/1075	29/09/2025	42.20	21.27	< 20	13.91	< 20	0.81	0.03	<1.0	<0.4	1.36	< 20	< 0.5
NAAQS Limits*			100	60	80	80	400	2	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]

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Test methods of analyzed parameters

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PM ₁₀	IS 5182 (Part XXIII) 2006
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NO ₂	IS 5182 (Part VI) 2006
CO	IS 5182 (Part X) 1999
Lead (Pb)	IS 5182 (Part XXII) 2004
Ozone (O ₃)	IS 5182 (Part IX) 2019
Ammonia (NH ₃)	IS 5182 (Part XXV) 2018
Benzene (C ₆ H ₆)	IS 5182 (Part XI) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part XII):2004
Arsenic (As)	IS 5182 (Part XXII):2004
Nickel (Ni)	IS 5182 (Part XXI):2020

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2822-DTB-2020	01/02/2025	31/01/2026
2	Fine Particulate Sampler - Sr. No. 1359-J-23	18/12/2024	17/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	04/08/2025	03/11/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0951, 0966, 0981, 0995, 1011, 1029, 1044, 1059, 1074	Test Report Date	03/10/2025
Customer Name and Address	M/s. VEDANTA LIMITED. VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIMM – GOA.		
Letter Ref / Date .	As per dated PO /2025/05/06288 (7920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Month of Sampling	SEPTEMBER – 2025		

SAMPLING DETAILS - AMBIENT AIR MONITORING :

Sampling Location	Navelim Village
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	90

ANALYSIS REPORT :

Sr. No.	Report No.	Date of Sampling	Parameters											
			PM ₁₀	PM _{2.5}	SO ₂	NO _x	NH ₃	CO***	Pb	C ₆ H ₆	As	Ni	O ₃ ***	B(a)P
1	GA/VEN/25/0951	01/09/2025	41.64	19.61	< 20	11.69	< 20	0.92	0.01	<1.0	<0.4	2.35	< 20	< 0.5
2	GA/VEN/25/0966	04/09/2005	38.81	17.65	< 20	11.94	< 20	0.97	0.04	<1.0	<0.4	3.24	< 20	< 0.5
3	GA/VEN/25/0981	08/09/2025	43.21	20.07	< 20	12.20	< 20	0.87	0.05	<1.0	<0.4	1.74	< 20	< 0.5
4	GA/VEN/25/0995	11/09/2025	37.72	17.43	< 20	12.83	< 20	0.86	0.01	<1.0	<0.4	2.24	< 20	< 0.5
5	GA/VEN/25/1011	15/09/2025	40.27	17.66	< 20	12.70	< 20	0.85	0.05	<1.0	<0.4	1.24	< 20	< 0.5
6	GA/VEN/25/1029	18/09/2025	42.62	20.82	< 20	13.21	< 20	0.71	0.03	<1.0	<0.4	2.49	< 20	< 0.5
7	GA/VEN/25/1044	22/09/2025	39.53	18.63	< 20	13.47	< 20	0.71	0.05	<1.0	<0.4	3.61	< 20	< 0.5
8	GA/VEN/25/1059	25/09/2025	44.35	21.69	< 20	13.51	< 20	1.01	0.03	<1.0	<0.4	1.30	< 20	< 0.5
9	GA/VEN/25/1074	29/09/2025	41.72	20.74	< 20	14.04	< 20	0.99	0.05	<1.0	<0.4	0.62	< 20	< 0.5
NAAQS Limits*			100	60	80	80	400	2	1	5	6	20	100	1
Units			µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³

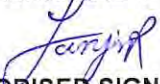
*N.A.A.Q.S. – National Ambient Air Quality Standards.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

End

For GADARK LAB PVT. LTD.


AUTHORISED SIGNATORY
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Test methods of analyzed parameters

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PM _{2.5}	IS 5182 (Part XXIV) 2019
SO ₂	IS 5182 (Part II) 2001
NO ₂	IS 5182 (Part VI) 2006
CO	IS 5182 (Part X) 1999
Lead (Pb)	IS 5182 (Part XXII) 2004
Ozone (O ₃)	IS 5182 (Part IX) 2019
Ammonia (NH ₃)	IS 5182 (Part XXV) 2018
Benzene (C ₆ H ₆)	IS 5182 (Part XI) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part XII):2004
Arsenic (As)	IS 5182 (Part XXII):2004
Nickel (Ni)	IS 5182 (Part XXI):2020

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 2831-DTB-2020	02/02/2025	01/02/2026
2	Fine Particulate Sampler - Sr. No. 1341-G-23	17/09/2024	16/09/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	04/08/2025	03/11/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	

Annexure III
Pre and post monsoon ground water monitoring reports



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0547	Test Report Date	31/05/2025
Customer Name and Address	M/s. VEDANTA LIMITED. (PIG IRON EXPANSION PLANT). SURVEY NO. 61/1,61/(PART),120/1,120/2(PART),177(PART),205(PART), 206(PART),207(PART), VILLAGE NAVELIM, BICHOLIM - GOA.		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0547	Page No.	1 of 1
Sampling Done On	27/05/2025	Sample Received	27/05/2025
Sample Collected By	Mr. Shirishkumar Rane	Analysis Period	27/05/2025 To 31/05/2025
Sample Description	Maina - Digambar Naik Well Water, 1 lit in plastic bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Hazen unit	< 1.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.25	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.08	6.5 - 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	μS/cm	158	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	44	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	12.80	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	2.25	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	116	500.0 Max.	2000.0 Max.	APHA 2540 C
Nitrate	mg/ltr	1.05	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	28.02	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	16.04	30.0 Max.	100.0 Max.	APHA 3500 Mg B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 - B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	15	Not Specified		APHA 2540 D
Iron	mg/ltr	0.085	1.0 Max.	No Relaxation	APHA 3120 B

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

Note:

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3. Samples will be preserved for a period 15 days from the delivery of Test Certificate.
4. Customer complaint register is available at laboratory.

CHECKED BY



GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.

Tel. : (02362) 223519 • E-mail : info@gadark.in • Website : www.gadark.in

OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.

Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0545	Test Report Date	31/05/2025
Customer Name and Address	M/s. VEDANTA LIMITED. (PIG IRON EXPANSION PLANT). SURVEY NO. 61/1,61/(PART),120/1,120/2(PART),177(PART),205(PART), 206(PART),207(PART), VILLAGE NAVELIM, BICHOLIM - GOA.		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0545	Page No.	1 of 1
Sampling Done On	27/05/2025	Sample Received	27/05/2025
Sample Collected By	Mr. Shirishkumar Rane	Analysis Period	27/05/2025 To 31/05/2025
Sample Description	Navelim - Sanjay Naik Well Water Sample, 1 lit in plastic bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Colour Unit	< 1.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.2	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.24	6.5 - 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	μS/cm	152	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	40	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	14.77	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	1.75	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	114	500.0 Max.	2000.0 Max.	APHA 2540 C
Nitrate	mg/ltr	1.10	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	28.02	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	12.03	Not Specified		APHA 3500 Mg B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	11	Not Specified		APHA 2540 D
Iron	mg/ltr	0.06	1.0 Max.	No Relaxation	APHA 3120 B

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

Note:

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2. Test certificate shall not be reproduced except in full, without written approval of the laboratory.
3. Samples will be preserved for a period 15 days from the delivery of Test Certificate.
4. Customer complaint register is available at laboratory.

CHECKED BY



GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.

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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0546	Test Report Date	31/05/2025
Customer Name and Address	M/S. VEDANTA LIMITED (PIG IRON PLANT) PIG IRON PLANT SURVEY NOS. 29/1, 31/1,27,39,41,44/3,42/1, 43/1,54,56/17, AMONA, BICHOLIM-GOA		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0546	Page No.	1 of 1
Sampling Done On	27/05/2025	Sample Received	27/05/2025
Sample Collected By	Mr. Shirishkumar Rane	Analysis Period	27/05/2025 To 31/05/2025
Sample Description	Amona – Sandesh Naik Well Water, 1 lit in plastic bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Hazen unit	< 1.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.22	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.26	6.5 – 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	µS/cm	148	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	48	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	15.76	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	1.25	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	102	500.0 Max.	2000.0 Max.	APHA 2540 C
Nitrate	mg/ltr	1.18	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	32.02	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	16.04	Not Specified		APHA 3111 B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 - B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	6	Not Specified		APHA 2540 D
Iron	mg/ltr	0.082	1.0 Max.	No Relaxation	APHA 3120 B

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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3. Samples will be preserved for a period 15 days from the delivery of Test Certificate.
4. Customer complaint register is available at laboratory.

CHECKED BY



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0971	Test Report Date	01/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED. (PIG IRON EXPANSION PLANT). SURVEY NO. 61/1,61/(PART),120/1,120/2(PART),177(PART),205(PART), 206(PART),207(PART), VILLAGE NAVELIM, BICHOLIM – GOA.		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0971	Page No.	1 of 1
Sampling Done On	27/10/2025	Sample Received on	28/10/2025
Sample Collected By	Mr. Digambar Khot	Analysis Period	28/10/2025 To 01/11/2025
Sample Description	Maina – Digambar Naik Well Water, 1 lit in plastic bottle.		

ANALYSIS REPORTS:


Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Hazen unit	< 5.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.1	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.01	6.5 – 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	µS/cm	116	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	36	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	9.95	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	1.25	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	71	500.0 Max.	2000.0 Max.	APHA 2540 C
Oil & Grease	mg/ltr	< 1.0	---	---	APHA 5520 B
Nitrate	mg/ltr	< 0.01	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	28.02	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	8.02	30.0 Max.	100.0 Max.	APHA 3500 Mg B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 - B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	< 5.0	Not Specified		APHA 2540 D
Iron	mg/ltr	0.024	1.0 Max.	No Relaxation	APHA 3120 B

BACTERIOLOGICAL TEST:

E. Coli	MPN Index / 100ml	13	Not Specified		IS 1622 : 1981
Total Coliform	MPN Index / 100ml	23	Not Specified		IS 1622 : 1981

End

For GADARK LAB PVT. LTD.


AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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- Customer complaint register is available at laboratory.


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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0972	Test Report Date	01/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED. (PIG IRON EXPANSION PLANT). SURVEY NO. 61/1,61/(PART),120/1,120/2(PART),177(PART),205(PART), 206(PART),207(PART), VILLAGE NAVELIM, BICHOLIM - GOA.		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0972	Page No.	1 of 1
Sampling Done On	27/10/2025	Sample Received on	28/10/2025
Sample Collected By	Mr. Digambar Khot	Analysis Period	28/10/2025 To 01/11/2025
Sample Description	Navelim - Sanjay Naik Well Water Sample, 1 lit in plastic bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Colour Unit	< 5.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.2	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.32	6.5 - 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	µS/cm	198	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	62	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	17.90	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	11.5	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	120	500.0 Max.	2000.0 Max.	APHA 2540 C
Oil & Grease	mg/ltr	< 1.0	---	---	APHA 5520 B
Nitrate	mg/ltr	< 0.01	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	44.04	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	18.05	Not Specified		APHA 3500 Mg B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	< 5.0	Not Specified		APHA 2540 D
Iron	mg/ltr	0.034	1.0 Max.	No Relaxation	APHA 3120 B

BACTERIOLOGICAL TEST:

E. Coli	MPN Index / 100ml	280	Not Specified		IS 1622 : 1981
Total Coliform	MPN Index / 100ml	500	Not Specified		IS 1622 : 1981

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0973	Test Report Date	01/11/2025
Customer Name and Address	M/S. VEDANTA LIMITED (PIG IRON PLANT) PIG IRON PLANT SURVEY NOS. 29/1, 31/1,27,39,41,44/3,42/1, 43/1,54,56/17, AMONA, BICHOLIM-GOA		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0973	Page No.	1 of 1
Sampling Done On	27/10/2025	Sample Received on	28/10/2025
Sample Collected By	Mr. Digambar Khot	Analysis Period	28/10/2025 To 01/11/2025
Sample Description	Amona – Sandesh Naik Well Water, 1 lit in plastic bottle.		

ANALYSIS REPORTS:

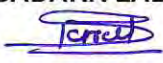
Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Hazen unit	< 5.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.3	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.21	6.5 – 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	µS/cm	128	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	28	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	11.94	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	0.75	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	73	500.0 Max.	2000.0 Max.	APHA 2540 C
Oil & Grease	mg/ltr	< 1.0	---	---	APHA 5520 B
Nitrate	mg/ltr	< 0.01	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	18.01	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	10.03	Not Specified		APHA 3111 B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 - B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	< 5.0	Not Specified		APHA 2540 D
Iron	mg/ltr	0.026	1.0 Max.	No Relaxation	APHA 3120 B

BACTERIOLOGICAL TEST:

E. Coli	MPN Index / 100ml	17	Not Specified	IS 1622 : 1981
Total Coliform	MPN Index / 100ml	22	Not Specified	IS 1622 : 1981

End

For GADARK LAB PVT. LTD.


AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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Annexure IV
Water withdrawal permissions



GOVERNMENT OF GOA
OFFICE OF THE EXECUTIVE ENGINEER
WORKS DIVISION I
WATER RESOURCES DEPARTMENT
1st FLOOR, NR. POLICE STATION,
SINCHAI BHAVAN, PORVORIM GOA

No. WRD/WDI/ASW/F.15/2025-26/ 13

Date: 04 / 04 / 2025

To,
M/s Vedanta Ltd,
Sesa Ghor,
20 EDC Complex,
Patto Panaji-Goa.

Sub: Renewal of N.O.C for water drawal from Valvonti river at
Virdi, Sanquelim, for Vedanta Ltd, Amona & Navelim Plant.

Ref No: WRD/WD VI/SD-I/2023-24/ F.50/434 dated: 17/02/2025.

Sir,

With reference to your application dated 22/02/2024, the N.O.C for drawal of water from Valvonti river at Virdi to the extent of 10,000.00 cum/day is renewed for further period with following conditions:

1. Measuring devices shall be fixed by the applicant at their own cost.
2. The company should pay for the raw water at prevailing rate as fixed by Government.
3. Before releasing the residual water/concentrate, following precautions are to be taken:
 - a) The residue to the desalinated process should be treated and let out into the river so that the marine life and ecology and other environmental parameters are not affected.
 - b) As abundant precaution, the residual water should be mixed with water to cool down the concentrate to normal temperature.
 - c) The residual water should be released during of start of low tide.
 - d) To dilute the residual concentrate to bring it back to normal sea salinity of 30,000g/lit before releasing into the canal.
 - e) If there is any adverse effect on the environmental/marine life or any other reason, Government reserves the right to withdrawal N.O.C. without prejudice.
4. Validity of N.O.C. is further extended upto 19th Aprill, 2026.

Yours Faithfully,


EXECUTIVE ENGINEER-I &
CANAL OFFICER (N)

Copy to:-

1. The Chief Engineer, W.R.D, Sinchai Bhavan, Alto Porvorim-Goa.
2. The Superintending Engineer, Circle I, W.R.D, Sinchai Bhavan, Alto Porvorim-Goa.
3. The Executive Engineer, W.D. VI, W.R.D., Bicholim-Goa.



GOVERNMENT OF GOA
OFFICE OF THE EXECUTIVE ENGINEER
WORKS DIVISION I
WATER RESOURCES DEPARTMENT
1st FLOOR, NR. POLICE STATION,
SINCHAI BHAVAN, PORVORIM GOA

No. WRD/WDI/ASW/F.15/2024-25/633

Date: 06 / 03 / 2025

To,
M/s Vedanta Ltd,
Sesa Ghor,
20 EDC Complex,
Patto Panaji-Goa.

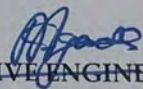
Sub: Renewal of N.O.C for water drawal from Mandovi river at
Amona, for 30 MW waste heat recovery Power plant.
Ref: No: WRD/WDVI/SD-I/2024-25/F.50/426 dtd: 06/02/2025

Sir,

With reference to your application dated 22/01/2025, the N.O.C for drawal of water from Mandovi river at Amona to the extent of 7000.00m³/day is renewed for further period with following conditions:

1. The drawal of water to the plant shall not exceed the sanctioned quantity.
2. Measuring devices shall be fixed by the applicant at their own cost.
3. The company should pay for the raw water at prevailing rate as fixed by Government.
4. Before releasing the residual water/concentrate, following precautions are to be taken:
 - a) The residue to the desalinated process should be treated and let out into the river so that the marine life and ecology and other environmental parameters are not affected.
 - b) As abundant precaution, the residual water should be mixed with water to cool down the concentrate to normal temperature.
 - c) The residual water should be released during of start of low tide.
 - d) To dilute the residual concentrate to bring it back to normal sea salinity of 30,000g/lit before releasing into the canal.
 - e) If there is any adverse effect on the environmental/marine life or any other reason, Government reserves the right to withdraw N.O.C. without prejudice.
5. Validity of N.O.C. is further extended upto 21st February, 2026.

Yours Faithfully,


EXECUTIVE ENGINEER-I &
CANAL OFFICER (N)

Copy to:-

1. The Chief Engineer, W.R.D, Sinchai Bhavan, Alto Porvorim-Goa.
2. The Superintending Engineer, Circle I, W.R.D, Sinchai Bhavan, Alto Porvorim-Goa.
3. The Executive Engineer, Works Division-VI, WRD, Bicholim Goa.

Annexure V
Mitigation measures

MITIGATION MEASURES

Baghouse systems



Windshields along the boundaries

MITIGATION MEASURES



Windshields with top sprinklers



MITIGATION MEASURES

Fogging systems



Rain guns and fog cannon



Closed conveyors



MITIGATION MEASURES

Covering transportation trucks



Speed limit board



Wheel wash system at exit



Road sweeping machine



MITIGATION MEASURES

Closed raw material shed

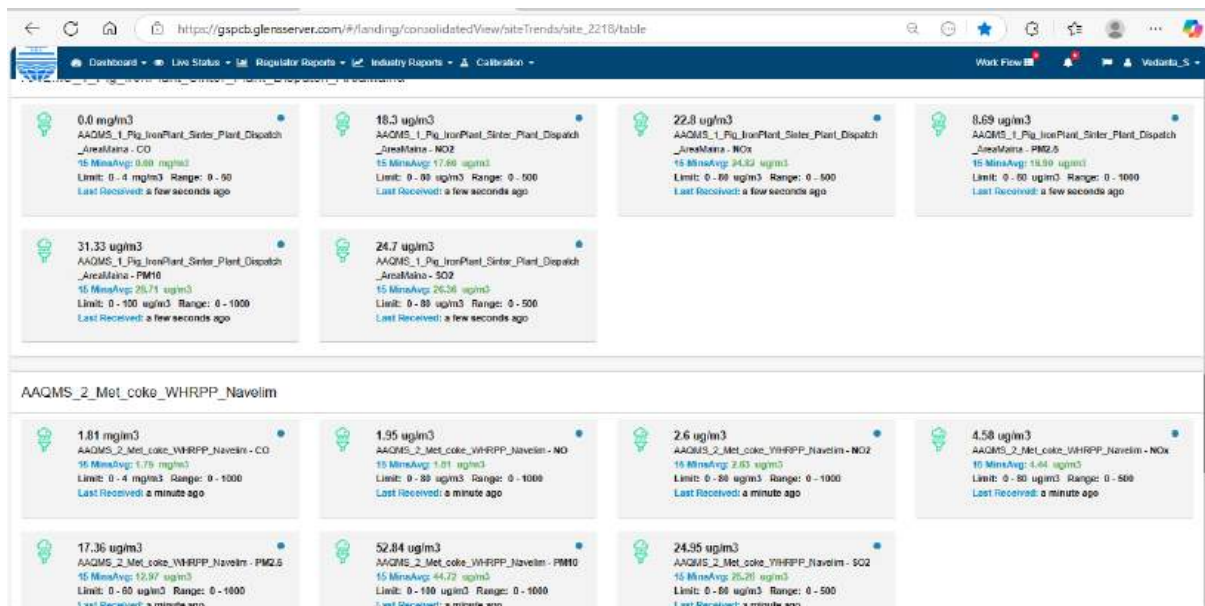
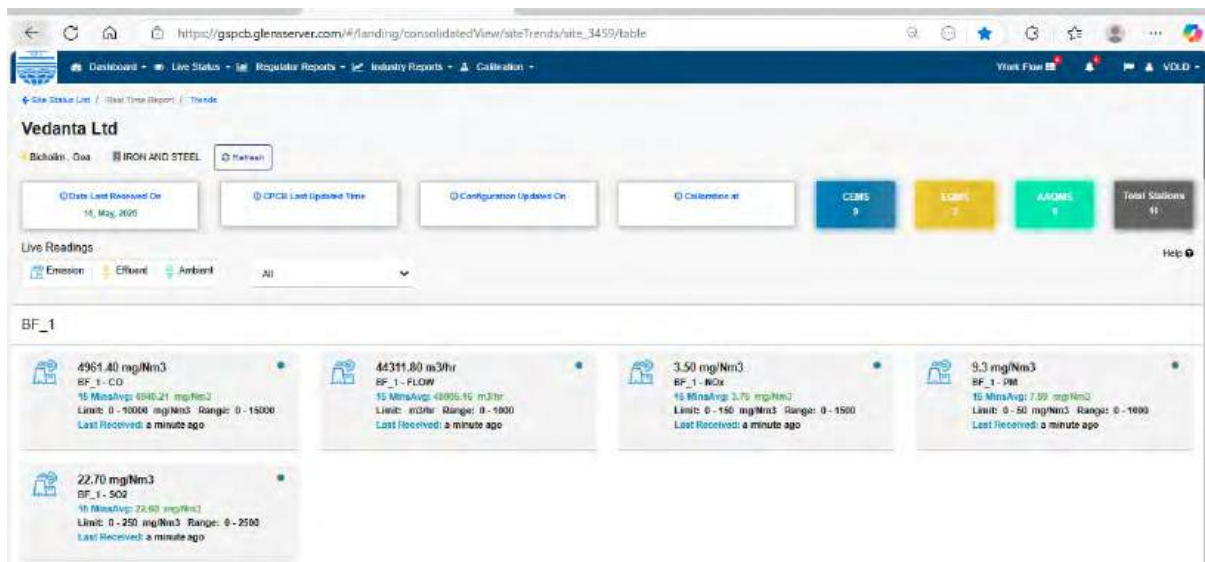
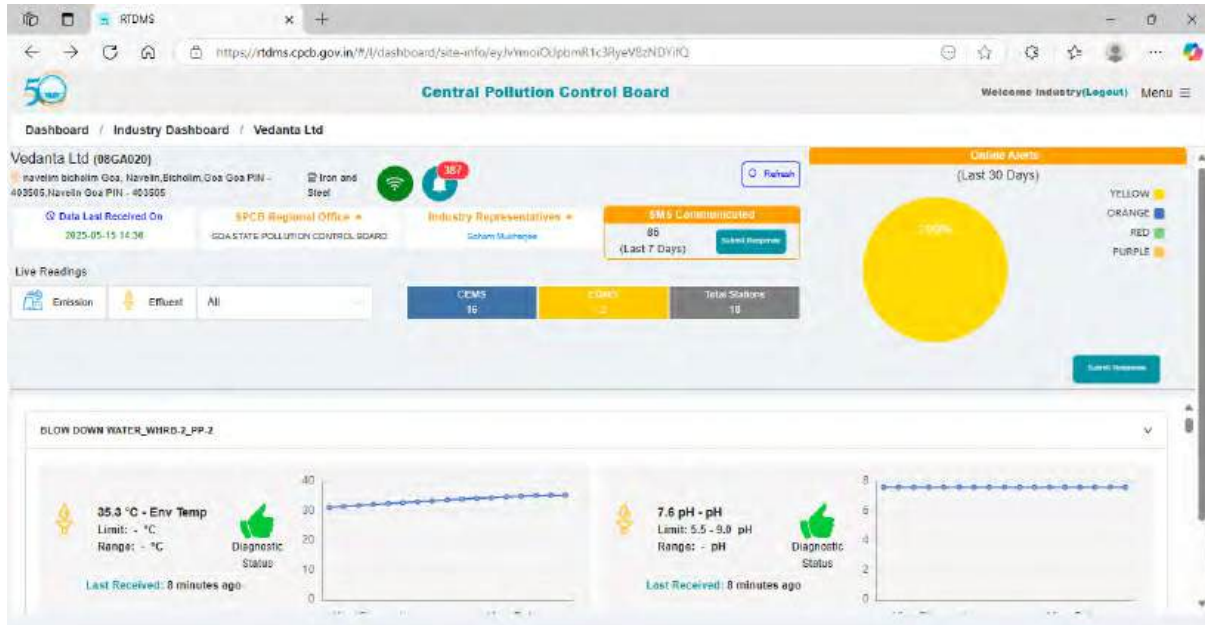


Green belt developed



CEMS and CAAQMS connected to GSPCB and CPCB

MITIGATION MEASURES



Annexure VI
Green belt developed along the boundaries and windshield

Developed green belt and windshield along the boundaries



Developed green belt and windshield along the boundaries



Developed green belt and windshield along the boundaries



Developed green belt and windshield along the boundaries



Developed green belt and windshield along the boundaries



Developed green belt and windshield along the boundaries



Developed green belt and windshield along the boundaries



Developed green belt and windshield along the boundaries



Developed green belt and windshield along the boundaries



PLANTATION 25-26

Plantation at the toe of geo textile covered dump



PLANTATION 25-26

Plantation on geotextile covered dumps



PLANTATION 25-26



PLANTATION 25-26



PLANTATION 25-26



Plantation done along the boundaries



PLANTATION 25-26

GAP filling in existing green belt



PLANTATION 25-26

Plantation inward slips

UKMINI GARDNER
 Prop: Nitin V. Parab
 H. No. 456, Arkalam-wada,
 Amara-Goa, Post Marcela-402107
 Landscaping & Gardening M: 9420974688 / 9421248708
 GSTIN: 30ALRPP1035A1Z4 PAN No: ALRPP1035A

To: Vedanta Ltd,
 Navaim Goa

Month: Jun
 Date: 25/06/25

Sub: Issue of Gate Pass for plant

Sir,

Please issue the Gate Pass for plant

1) Bamboo — 400 nos
 Total = 400 nos

BP No: 4920078108
 Vehicle No: GA 05T 5281

[Stamp: GATE PASS, 25/06/25, 11:20, 11:30, 7:00, 7:00]

For UKMINI GARDNER
 For: Nitin Parab

UKMINI GARDNER
 Prop: Nitin V. Parab
 H. No. 456, Arkalam-wada,
 Amara-Goa, Post Marcela-402107
 Landscaping & Gardening M: 9420974688 / 9421248708
 GSTIN: 30ALRPP1035A1Z4

To: Vedanta Ltd,
 Navaim Goa

Date: 06/06/25

Sub: Issue the Gate Pass for plant

Rs Sir Please Issue the Gate Pass for following plant

1) Jamun — 20 nos
 2) KaJu — 20 nos
 3) Bamboo — 40 nos
 4) Aila — 20 nos
 Total = 100

vermicompost — 10 Bag

BP No: 4920078108
 Vehicle No: GA 04T 5327

[Stamp: GATE PASS, 06/06/25, 11:20, 11:30, 7:00, 7:00]

For UKMINI GARDNER
 For: Nitin Parab

UKMINI GARDNER
 Prop: Nitin V. Parab
 H. No. 456, Arkalam-wada,
 Amara-Goa, Post Marcela-402107
 Landscaping & Gardening M: 9420974688 / 9421248708
 GSTIN: 30ALRPP1035A1Z4

To: Vedanta Ltd,
 Amara Goa

Date: 01/06/2025

Sub: Issue the Gate Pass for Plant

Rs Sir Please Issue the Gate Pass for following plant

1) Totopuri — 25 nos
 2) Kokam — 50 nos
 3) Satin — 50 nos
 4) Banana — 50 nos
 5) Jackfruit — 25 nos
 Total = 200

vermicompost — 10 Bag

BP No: 4920078108
 Vehicle No: GA 04T 5327

[Stamp: GATE PASS, 01/06/25, 11:20, 11:30, 7:00, 7:00]

For UKMINI GARDNER
 For: Nitin Parab

UKMINI GARDNER
 Prop: Nitin V. Parab
 H. No. 456, Arkalam-wada,
 Amara-Goa, Post Marcela-402107
 Landscaping & Gardening M: 9420974688 / 9421248708
 GSTIN: 30ALRPP1035A1Z4

To: Vedanta Ltd,
 Amara Goa

Date: 10/06/2025

Sub: Issue the Gate Pass for Plant

Rs Sir Please Issue the Gate Pass for following plant

1) Totopuri — 25 nos
 2) Kokam — 50 nos
 3) Satin — 50 nos
 4) Banana — 50 nos
 5) Jackfruit — 25 nos
 Total = 200

vermicompost — 10 Bag

BP No: 4920078108
 Vehicle No: GA 05T 5281

[Stamp: GATE PASS, 10/06/25, 11:20, 11:30, 7:00, 7:00]

For UKMINI GARDNER
 For: Nitin Parab

Annexure VII
Details of plantation uploaded on MeriLiFE portal

Plantation drive on WED 25 under the campaign EK PED MAA KE NAAM at Vedanta Limited Value-Added Business Amona Navelim Goa and Amona high school Goa

MeriLIFE

Vandita Korgaokar

← Back #EkPedMaaKeNaam Plantation Form Dashboard Report

Place
☒ Urban ☐ Rural

State / UT* Goa (GA) District* North Goa

Municipal Corporation/Cantonment Ward No.

Place* Location (Geo Tag)

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Regular

Upload Geotagged Photos*

Select Image

Not more than 5 photos (.jpg, .jpeg, .png) and max. 2 mb for each photo

Photo Caption *(Describe about your photo not more 200 words)
Plantation drive carried out at Vedanta LI

Upload Video Clips

Select Video

Not more than 3 videos and each video not more than 45 seconds (.mp4, .mkv) and max. 5 mb for each video

Video Caption (Describe about your video not more 200 words)

Social Media Outreach URL

Remarks

Submit

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Plantation drive on WED 2025 under the campaign EK PED MAA KE NAAM at Vedanta Limited Value-Added Business Amona Navelim Goa and Amona high school Goa

<div>#PLANT4MOTHER</div> <div>PLANTING TREES.</div>										
Unique ID	State / UT	District	Municipal Area	Ward No.	Village	Panchayat	Panchayat Samiti	Place	Location (Geo Tag)	Activity/Event Category
275814	Goa (GA)	North Goa						VEDANTA LIMITED AMONA NAVELIM GOA,		Tree Plantation
277247	Goa (GA)	North Goa						VEDANTA LIMITED AMONA NAVELIM GOA,		Tree Plantation

Name Of Activity/Event	Number of Sites	Number of Seedlings	Number of Trees Survival	Forest Type	Organization Type	Overall Tree Health Condition
PLANTATION DRIVE ON WED 2025	3	400		regular	others	None
	1	10		regular	others	None



Survival	Forest Type	Organization Type	Overall Tree Health Condition	Uploaded Survival Photo	Date	Uploaded Geotag Photo	Uploaded Video Clip
regular	others	None			05/06/2025		Not Uploaded
regular	others	None			05/06/2025		Not Uploaded

Annexure VIII
Details of CER implementation

CER Status (EC 1.2 MTPA) – FY'26

Sr.N O	Activities	Status
1	Construction/Repair of 5 toilets each in Amona, Navelim and Khandola (total 15 toilets)	9 Toilets Completed and remaining in progress
2	Supporting 5 women entrepreneurs with skill development, capacity building and support to procure tools and machineries with maximum spend of Rs. 2 lac/enterprise	Supported 11 Women SHGs (for stalls, Purument Bazaar, 1 Incense stick making etc along with capacity building trainings)
3	20 Girl students to be supported	Utkarsh Scholarship given in FY'25
4	Identification & management of 10 Blackspots for garbage by providing dustbins & CCTV surveillance	Blackspots identification done and further work in progress
5	Support with EV Rickshaw for Garbage collection to VP	Under implementation



Annexure IX
Activities carried out as per approved wildlife management plan

Ref No. VAB/ENV/2022-23/42

Date: 27/12/2022

To,

The Office of The Deputy Conservator of Forests,
Wildlife and EcoTourism (North) Division
1st Lift, 4th Floor, Junta House,
Panaji-403 001 Goa

Sub: - Wildlife Conservation Plan for obtaining Environmental Clearance

Reference:

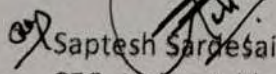
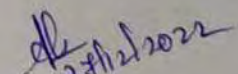
1. Letter no. 1-576/WL&ET(N)/2022-2023/661 dated 02/06/2022 received by us on 15/06/2022.

Respected sir,

With respect to the letter received from your good office vide Letter no. 1-576/WL&ET(N)/2022-2023/661 dated 02/06/2022 received by us on 15/06/2022, we are handing over 10 nos of trap cameras w.r.t to compliance Sr.No.4 of providing trap cameras to analyse the movement of wild animals.

Thanking you

Yours faithfully

For Vedanta Limited- Value Added Business
Saptesh Sardesai
CEO- Value Added Business
Despatch Clerk
O/o The Dy. Conservator of Forests
Wildlife & Eco-Tourism (North)
Panaji - Goa**VEDANTA LIMITED**

Sesa Goa iron ore: Sesa Ghor, 20 EDC Complex, Patto, Panjim, Goa - 403 001, India
T: 91 0832 2460600 | Website: www.sesagoaironore.com

Registered Office:

Vedanta Limited, 1st Floor, "C" wing, Unit 103, Corporate Avenue, Atul Projects, Chakala, Andheri (East), Mumbai 400093, Maharashtra, India
CIN: L13209MH1965PLC291394



GOVERNMENT OF GOA
OFFICE OF THE DEPUTY CONSERVATOR OF FORESTS
WILDLIFE & ECO- TOURISM (NORTH) DIVISION
1ST LIFT, 4TH FLOOR, JUNTA HOUSE,
PANAJI - 403 001 (GOA)

Phone: 0832-2229701/ E mail: dcfwlnorth-forest.goa@nic.in

No.1-576/WL&ET(N)/2022-23

Dated:27/12/2022

RECEIPT

Received 10 nos. of trap cameras alongwith Safety Cases, 32 GB Memory Card & Duracell Batteries under Wildlife Conservation Plan for obtaining Environmental Clearance to analyse the movement of wild animals from Vedanta Limited, Sesa Goa Iron Ore : Sesa Ghor, 20 EDC Complex, Patto Panaji vide letter no.VAB/ENV/2022-23/42 dated 27/12/2022.



(Anand S. Jadhav)

Dy. Conservator of Forests
Wildlife & Eco-Tourism (N)



GOVERNMENT OF GOA
OFFICE OF THE DEPUTY CONSERVATOR OF FORESTS
WILDLIFE & ECO- TOURISM (NORTH) DIVISION
1ST LIFT, 4TH FLOOR, JUNTA HOUSE,
PANAJI - 403 001 (GOA)

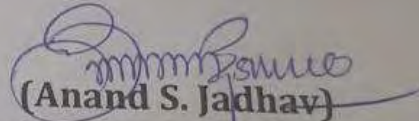
Phone: 0832-2229701/ E mail: dcfw/north-forest.goa@nic.in

No.1-576/WL&ET(N)/2022-23

Dated:10/02/2023

RECEIPT

Received 15 nos. of trap cameras alongwith Safety Cases, 32 GB Memory Cards & Duracell Batteries and assistance for celebration of Wildlife Week '2023 under Wildlife Conservation Plan from Vedanta Limited, Sesa Goa.


(Anand S. Jadhav)

Dy. Conservator of Forests
Wildlife & Eco-Tourism (N)

Letter No: VAB/ENV/23-24/23

Date:18/10/2023

To,

The Deputy Conservator of Forest – Wild Life North
Wildlife and EcoTourism (North) Division
1st Lift, 4th Floor, Junta House,
Panaji-403 001 Goa

Sub: - Implementation of approved Wildlife Conservation Plan

Reference:

1. Your letter numbered 1-576/WL&ET(N)/2022-2023/1131 dated 04/07/2023

Respected Sir,

We are sharing herewith the final proposal for rescue van with detail specification for your approval.

1. Vehicle Offer :

S.No.	Details	Value in Rupees
1.	SML ISUZU Cabin Chassis Prestige 4WD on 3365 Wheel Base With Power Steering BS VI	19,64,844.00
2.	GST @ 28%	5,50,156.00
Total		25,15,000.00
Terms and Conditions :		
<ol style="list-style-type: none">1. TCS @ 1% extra on above offered price.2. Price is valid till 30th July 2023.3. 100% payment advance along with Purchase Order.4. Delivery 2 to 4 weeks from date of confirm order.5. Other conditions as mentioned in the product catalogue.		

VEDANTA LIMITED

Sesa Goa Iron Ore: Sesa Ghor, 20 EDC Complex, Patto, Panjim, Goa - 403 001, India
T : 91 0832 2460600 - Website: www.sesagoaonore.com

18/10/2023
Despatch Clerk
O/o The Dy. Conservator of Forests
Wildlife & Eco-Tourism (North)
Panaji - Goa

2. Vehicle Fabrication Charges

S.No.	Details	Value in Rupees
1.	<p>Fabrication of "Animal Rescue Vehicle" similar to the existing vehicles supplied by the SML-ISUZU Limited to "VAN VIHAR" Bhopal the past with additional improvements.</p> <p>Features :</p> <ul style="list-style-type: none"> a. Animal Cabin area with improved insulation for better cooling. b. Overhead Luggage carrier with equipment box. c. Ladder for easy access to top of the cabin. d. Foldable seats for 4 persons with steel frame and improved cushioning. e. Stainless Steel Wash basin with Tap. f. Overhead Water tank of 60 Litre capacity. g. Refrigerator for medicine supplies and Ice packs. h. Stainless Steel Counter Top with cupboard for supplies and equipment. i. Water Spray nozzle for humidity control inside cabin. j. 1.5 Ton Air conditioner unit for extra cooling inside the cabin. k. Positive locking of cage on floor to avoid jumping of cage during movements. l. Extra strengthening with 6 angle sections for the floor of cabin. m. One tower bolt in the tool box with Emergency gate. n. Fully automatic Cage retrieval mechanism along with automatic door closing. o. Top mounted rear CCTV Camera with display unit near driver. p. Flood light facility for rear loading door. 	17,26,000.00
2.	GST @ 18%	3,10,680.00
Total		20,36,680.00

Terms and Conditions :

1. Delivery of completed vehicle as per above specs shall be 8-12 weeks from date of receipt of 4WD Cabin Chassis.
2. TCS @ 1 % extra on above price.
3. 50% payment advance along with Purchase Order.
4. Balance payment after delivery and sign off of fully fabricated vehicle.
5. Delivery charges of Rs. 45,000/- at site in Goa.
6. Offer valid for 60 days from date of quotation.
7. Colour scheme to be finalized at the time of delivery.
8. Promotion signages shall be in the form of Stickers and payable at actuals.
9. **After receipt of clear purchase order, we shall submit detail drawings with a 3D presentation for better understanding of the user within a week.**

VEDANTA LIMITED

Sesa Goa Iron Ore: Sesa Ghor, 20 FDC Complex, Patto, Panaji, Goa - 405 004, India
T: +91 0832 2460600 | Website: www.sesagoaonmore.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, Atul Projects, Chakala, Andheri (East), Mumbai 400093, Maharashtra, India.

CIN: L13209MH1965PLC291394

10. We expect an official sign off from the concern user in presence of your representatives for positive acceptance of the vehicle.
11. Vehicle RTO and Insurance charges extra at actuals.

Total Price of the Rescue vehicle

Rs. 45,51,680.00

3. CAGE Fabrication Charges

Cage specifications and price	
Details	Price
Cage Specifications : 1. 7'4" (L) X 3'2" (B) X 3'7" (H) 2. Floor 2 mm MS Chequered Plate 3. Side Sheet 1.6 mm 4. Two Ventilator and one sliding door. 5. MS Bars of 16 mm 6. Industry quality Hard PVC Wheels.	Rs. 1,35,000.00
GST @ 18 %	Rs. 24,300.00
Total Price	Rs. 1,59,300.00
Total price for rescue van, vehicle fabrication and cage fabrication	Rs. 4710980

Request your good office to please confirm on the specification provided above in order to process the offer.

Thanking you,

Yours faithfully,
For Vedanta Limited


Saptesh Sardesai
CEO Value Added Business & Sesa Cement
Vedanta Ltd

VEDANTA LIMITED

Sesa Goa Iron Ore, Sesa Ghor, 20 EDC Complex, Patto, Panjim, Goa - 403 001, India
T : +91 0832 2460600 | Website: www.sesagoironore.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, Atul Projects, Chakala, Andheri (East), Mumbai 400093, Maharashtra, India

CIN: L13209MH11065PLC291394



E mail: dcfwlnorth-forest.goa@nic.in

RE: Rescue Van Drawing Approval



Prachi Kudnekar

To: DCFWLNorth

Cc: Vandita Korgaokar, Sohani Mukherjee, Saptesh Sardesai

Bcc: Banita Gaonkar

Public (C4)

☺️ Reply Reply All Forward

Fri 23-02-2024 14:47

Sir,

With respect to Wild life management plan(Approval letter No. 1-576(PART)WL&ET(N)/2021-2022/554 dated 28/05/2021) of Value Added Business of Vedanta Ltd (located at Amona – Navelim Goa and your trailing mail dated 19/02/2024,below is the vendors response against each point asked towards additional utilities for the rescue van. The estimate for the Fabrication of Storage bins, SS First Aid Box, Other Provisions for Storage and Ceiling reinforcement will be approximately 92k plus GST 18% which will be charged additionally and will be taken from line item no.1(Establishment of waterholes for wildlife in the buffer area) or other item where amount is available from approved wildlife management plan hence kindly confirm if we need to proceed with the implementation.

Sr. No	Requirement	Type	Remarks from Midwest
1.	Provision for storing Nylon nets used in animal restrain there will be three sets of nets of three different dimension weighing about 100 kg	Storage can be Hammock type within the crate of rescue van.	The said provision can be incorporated in the structure.
2.	Provision for stacking First Aid Box (Veterinary and First aid box for human use. Each box size is 60 cm x 40 cm x 40 cm size	Metallic storage cabinet with locking mechanism.	The said cabinet can be carved out of wood or SS, and will be hanged inside the body for ease of accessibility.
3.	Collapsible racks three tier on sideways for storing Rescue equipment like restrain poles, y tongs, jab sticks etc.	Metallic pipe type or aluminium pipe type collapsible racks on side of crates inside.	Will require the dimensions of the equipment which is needed to be kept in the vehicle.
4.	Extra height luggage carrier on top to be used as Machan or raise platform for darting problematic animal from safe location.	Metallic type	Included in fabrication for Point 6.
5.	Proper drain for inside of crate in rescue van for draining urine and washing inside of crate. With 10 litre plastic or fibre collection bin.	PVC type with Attached barrel for collection bin type.	Already included in the design.
6.	Crate ceiling top surface to be flat and reinforced from bottom so as to allow staff to stand or sit on top of roof of vehicle while darting animal.	Metallic concealed reinforcement from bottom of crate top.	Can be done with a collapsible railing for security and stability of the staff.



Phone: 0832-2229701/ Fax: 0832- 2422864
E mail: dcfwlnorth-forest.goa@nic.in

Dated: - 27/02/2024
Phalguna 8, 1945

(Anand S. Jadhav, IFS)
Dy. Conservator of Forests
Wildlife & Eco- tourism (N)

[illegible]

"ATMANIRBHAR BHARAT"
"SWAYAMPURNA GOA"

Ref.No.: VAB/ENV/24-25/29

Date: 15/10/2024

To,

The Deputy Conservator of Forest – Wild Life North
Wildlife and EcoTourism (North) Division
1st Lift, 4th Floor, Junta House,
Panaji-403 001 Goa

Sub: Implementation of approved Wildlife Conservation Plan

Reference:

1. Approved Wild life conservation plan (WLCP) vide letter no.1-576(PART)WL&ET(N)/2021-2022/554 dated 28/05/2021
2. Your letter numbered 1-576/WL&ET(N)/2022-2023/661 dated 02/06/2022 Jyaistha 12,1944 received by our office on 15/06/2022
3. Your letter numbered 1-576/WL&ET(N)/2023-2024/4472 dated 16/02/2024 Magha 27,1945 received by our office on 22/02/2024

Respected Sir,

With reference to the above letter numbers, we would like to inform your good office that the below activities/items requested as per the WLCP are handed over to your good office for FY 2024-25. The complete details of the same are mentioned as below:

Sr.No as per WLCP	Plan of operations	Cost	Date of handover	Remarks
1	Establishment of water holes for wildlife in the buffer area FY 22-23,23-24	8,00,000	10/07/2024	Amount credited to vendor Hajrat Ali Nanesab Badgi RTGS Dr-BARBOPONDAX-Hajrat Ali Nanesab Badgi-CBX Internet-HDFCR52024071073842346-C76718100724104759

VEDANTA LIMITED

Value Added Business, Pig Iron Division, Amona, PO Marcela, Goa-403 107
T +91-832 641 2160 | F +91-832 238 5235 288 | Web: www.sesagoaironore.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, Atul Projects, Chakala, Andheri (East), Mumbai 400093, Maharashtra, India.
CIN: L13209MH1965PLC291394

15/10/2024
Despatch Clerk
O/o The Dy. Conservator of Forests
Wildlife & Eco-Tourism (North)
Panaji, Goa

2	Providing rescue van to Forest department	4,670,000	05/07/2024	Rescue van along with rescue cage handed over to Forest department
3	Providing rescue cages and rescue equipment's to the forest department			
6	Financial support to the department for celebrating wildlife week and sponsoring the prizes for the competitions	3,00,000	03/07/2024	NEFT - FDRL0001352 - C77205020724142929 - - 13520200007161 - SMC EVENTS NEFT - FDRL0001352 - C77206020724142930 - - 13520200007146 - MECH TECH EVENTS
	Total amount	57,70,000/-		

We request your good office to kindly acknowledge the same.

Thanking you,

Yours faithfully,

For Vedanta Limited – Value Addition Business


Saptesh Sardesai

CEO - Value added Business & Cement

VEDANTA LIMITED

Value Added Business, Pig Iron Division, Amona, PO Marcela, Goa-403 107
T +91-832 641 2160 | F +91-832 238 5235 288 | Web: www.sesagoaironore.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, Atul Projects, Chakala, Andheri (East), Mumbai 400093, Maharashtra, India.
CIN: L13209MH1965PLC291394

Annexure X
Archaeological sites monitoring reports



|| Shreeji ||

SHREEJI AQUA TREATMENT PVT. LTD.

Innovative Environmental Solutions Under One Roof

Accredited by NABL as per ISO/IEC 17025:2017

Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

• ENVIRONMENT • FOOD • ANIMAL FOOD & FEED • MICROBIOLOGY




TC-13877

Laboratory Recognized by Ministry of Environment, Forest & Climate Change, Govt. of India & NABL Valid Up to 13/06/2026.

ULR NO: TC138772500008437F

TEST REPORT

Lab Inward No. : SL/25-26/04/MAA/167D		Date of Sampling: 17-18/04/2025			
Client Name : M/s. VEDANTA LIMITED VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIM – GOA.		Start of analysis: 18/04/2025			
		End of Analysis: 22/04/2025			
		Report Date: 22/04/2025			
Sample Drawn By: SATPL Representative on 17-18/04/2025					
Order / Reference: As per TRF dated 17/04/2025					
Monitoring For : Ambient Air Monitoring					
Sampling Procedure : As per IS 5182.					
Limits : *N.A.A.Q.S.-National Ambient Air Quality Standards.					
Sampling Location : Near Siddhartha Caves, Suria ,(N15 ° 29'59.82972" E74° 01'30.0162")					
Lateral Distance : 10.0 meter		Duration : 24 Hrs.			
Receptor Height : 3.0 meter		Time : 11:55 am to 11:55 am			
Relative humidity [%]: 64		Ambient Temperature [°C]: 34			
RESULTS					
Sr. No.	Parameters	Results	Limits	Unit	Reference Method
1	Sulphur Dioxide (SO ₂)	7.81	<80.0	µg/m ³	IS 5182(Part-2)2001 R2022
2	Nitrogen Dioxide (NO ₂)	14.46	<80.0	µg/m ³	IS 5182(Part-6)2006 R2017
3	Particulate Matter PM ₁₀	51.19	<100.0	µg/m ³	IS 5182 (Part 23)2006 R2022
4	Particulate Matter PM _{2.5}	25.37	<60.0	µg/m ³	IS 5182 (Part 24)2019
5	Ozone (O ₃)	<20.0	<180.0 For 1 Hrs	µg/m ³	IS 5182(Part-9):R2019
6	Ammonia (NH ₃)	13.08	<400.0	µg/m ³	IS 5182(Part-25):R2018
REMARK: Reference to above mentioned monitoring report all the parameters are within the limits. ** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals. *** Hourly Value <i>Disclaimer: 'Information is supplied by customers represented in italic font'</i>					
				For Shreeji Aqua Treatment Pvt. Ltd.	
				SJM Managing Director Authorized Signatory	

A part of the report has been generated on the next page. The results relate to sample tested.

Page 1 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4,Shreeji Terrace Apt, Plot No. 53, Puma Nagar, Chikhali, Pune: 411019

Vadodara: Plot No.1, Shah Ind. Park-1, Vadodara-Savli, Lamdapura. 391 775 Dist. Vadodra

Customer Care No.: +919225247365 Email: info@shreejiaqua.com Web: www.shreejiaqua.com

Shreeji Aqua is always subject to improvement for better customer satisfaction, we welcome your feedback on pune_lab@shreejiaqua.com



|| Shreeji ||

SHREEJI AQUA TREATMENT PVT. LTD.

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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

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Laboratory Recognized by Ministry of Environment, Forest & Climate Change, Govt. of India & NABL Valid Up to 13/06/2026.

TEST REPORT

Lab Inward No. : SL/25-26/04/MAA/167D	Date of Sampling: 17-18/04/2025
Client Name : M/s. VEDANTA LIMITED	Start of analysis: 18/04/2025
	End of Analysis: 22/04/2025
VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIM – GOA.	Report Date: 22/04/2025
	Sample Drawn By: SATPL Representative on 17-18/04/2025

Order / Reference: As per TRF dated 17/04/2025

Monitoring For : Ambient Air Monitoring

Sampling Procedure : As per IS 5182.

Limits : *N.A.A.Q.S.-National Ambient Air Quality Standards.

Sampling Location : Near Siddhartha Caves, Surla ,(N15 ° 29'59.82972" E74° 01'30.0162")

Lateral Distance : 10.0 meter

Duration : 24 Hrs.

Receptor Height : 3.0 meter

Time : 11:55 am to 11:55 am

Relative humidity [%]: 64

Ambient Temperature [°C]: 34

RESULTS

Sr. No.	Parameters	Results	Limits	Unit	Reference Method
7	Carbon Monoxide (CO)	0.39	<4.0 for 1 Hrs	mg/m3	IS 5182(Part-10):1999 R2019
8	Lead as (Pb)	<0.01	<1.0	µg/m3	IS 5182(Part-22):2004 R2019
9	Benzene (C ₆ H ₆)	<0.1	<5.0**	µg/m3	IS 5182 (Part 11):2006 R2022
10	Benzo(a)Pyrene (BaP)	<0.1	<1.0**	ng/m3	IS 5182 (Part 12):2004 R2019
11	Arsenic (As)	<1.0	<6.0**	ng/m3	CPCB Guideline volume-1:2012
12	Nickel (Ni)	<0.5	<20.0**	ng/m3	IS 5182(Part-26):2020

REMARK: Reference to above mentioned monitoring report all the parameters are within the limits.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

Disclaimer: 'Information is supplied by customers represented in italic font

EQUIPMENT CALIBRATION DETAILS

Sr. No.	EquipmentName	Equipment ID	CertificateNo.	Calibration Detail	
				Calibrated Date	Calibration Due Date
201204156	Ambient Air Sampler-3	SATPL/AR/AAS-03/124	25031301/07	18.03.2025	17.03.2026
D307534576	Digital Electronic Balance	SATPL/WT/WL/39	FSC/2503/1801/005	15.03.2025	14.03.2026
NA	Digital Spectrophotometer Model	SATPL/WT/UV/30	—————	Inhouse Calibration	

For Shreeji Aqua Treatment Pvt. Ltd.



SJM
Managing Director
Authorized Signatory

— End of Test Report —

This report cannot be reproduced in parts. The results relate to sample tested.

Page 2 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4,Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

Vadodara: Plot No.1, Shah Ind. Park-1, Vadodara-Savli, Lamdapura. 391 775 Dist. Vadodra

Customer Care No.: +919225247365 Email: info@shreeji aqua.com Web: www.shreeji aqua.com

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SHREEJI AQUA TREATMENT PVT. LTD.

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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

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Laboratory Recognized by Ministry of Environment, Forest & Climate Change, Govt. of India & NABL Valid Up to 13/06/2026.

ULR NO: TC138772500008436F

TEST REPORT

Lab Inward No. : SL/25-26/04/MAA/167C	Date of Sampling: 17-18/04/2025
Client Name : M/s. VEDANTA LIMITED	Start of analysis: 18/04/2025
VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIM – GOA.	End of Analysis: 22/04/2025
	Report Date: 22/04/2025
	Sample Drawn By: SATPL Representative on 17-18/04/2025
Order / Reference: As per TRF dated 17/04/2025	
Monitoring For: Ambient Air Monitoring	
Sampling Procedure: As per IS 5182	
Limits: *N.A.A.Q.S.-National Ambient Air Quality Standards.	
Sampling Location: Near Mosque, Surla (N15° 29'51.67104" E74° 01'7.04532")	
Lateral Distance: 10.0 meter	Duration: 24 Hrs.
Receptor Height: 3.0 meter	Time : 11:35 am to 11:35 am
Relative humidity [%]: 64	Ambient Temperature [°C]: 34

RESULTS

Sr. No.	Parameters	Results	Limits	Unit	Reference Method
1	Sulphur Dioxide (SO ₂)	9.12	<80.0	µg/m ³	IS 5182(Part-2)2001 R2022
2	Nitrogen Dioxide (NO ₂)	18.06	<80.0	µg/m ³	IS 5182(Part-6)2006 R2017
3	Particulate Matter PM ₁₀	55.89	<100.0	µg/m ³	IS 5182 (Part 23)2006 R2022
4	Particulate Matter PM _{2.5}	26.61	<60.0	µg/m ³	IS 5182 (Part 24)2019
5	Ozone (O ₃)	<20.0	<180.0 For 1 Hrs	µg/m ³	IS 5182(Part-9):R2019
6	Ammonia (NH ₃)	12.25	<400.0	µg/m ³	IS 5182(Part-25):R2018

REMARK: Reference to above mentioned monitoring report all the parameters are within the limits.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

Disclaimer: 'Information is supplied by customers represented in italic font'

For Shreeji Aqua Treatment Pvt. Ltd.



SJM
Managing Director
Authorized Signatory

A part of the report has been generated on the next page. The results relate to sample tested.

Page 1 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4, Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

Vadodara: Plot No.1, Shah Ind. Park-1, Vadodara-Savli, Lamdapura. 391 775 Dist. Vadodra

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Laboratory Recognized by Ministry of Environment, Forest & Climate Change, Govt. of India & NABL Valid Up to 13/06/2026.

TEST REPORT

Lab Inward No. : SL/25-26/04/MAA/167C	Date of Sampling: 17-18/04/2025
Client Name : M/s. VEDANTA LIMITED	Start of analysis: 18/04/2025
	End of Analysis: 22/04/2025
VALUE ADDITION BUSINESS, AMONA AND NAVELIM, BICHOLIM - GOA.	Report Date: 22/04/2025
	Sample Drawn By: SATPL Representative on 17-18/04/2025

Order / Reference: As per TRF dated 17/04/2025

Monitoring For : Ambient Air Monitoring

Sampling Procedure : As per IS 5182

Limits : *N.A.A.Q.S.-National Ambient Air Quality Standards.

Sampling Location : Near Mosque, Surla (N15° 29'51.67104" E74° 01'7.04532")

Lateral Distance : 10.0 meter

Duration : 24 Hrs.

Receptor Height : 3.0 meter

Time : 11:35 am to 11:35 am

Relative humidity [%]: 64

Ambient Temperature [°C]: 34

RESULTS

Sr. No.	Parameters	Results	Limits	Unit	Reference Method
7	Carbon Monoxide (CO)	0.44	<4.0 for 1 Hrs	mg/m ³	IS 5182(Part-10):1999 R2019
8	Lead as (Pb)	<0.01	<1.0	µg/m ³	IS 5182(Part-22):2004 R2019
9	Benzene (C ₆ H ₆)	<0.1	<5.0**	µg/m ³	IS 5182 (Part 11):2006 R2022
10	Benzo(a)Pyrene (BaP)	<0.1	<1.0**	ng/m ³	IS 5182 (Part 12):2004 R2019
11	Arsenic (As)	<1.0	<6.0**	ng/m ³	CPCB Guideline volume-1:2012
12	Nickel (Ni)	<0.5	<20.0**	ng/m ³	IS 5182(Part-26):2020

REMARK: Reference to above mentioned monitoring report all the parameters are within the limits.

** Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

*** Hourly Value

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EQUIPMENT CALIBRATION DETAILS

Sr. No.	EquipmentName	Equipment ID	CertificateNo.	Calibration Detail	
				Calibrated Date	Calibration Due Date
160504060	Ambient Air Sampler-2	SATPL/AR/AAS-02/123	25031301/06	18.03.2025	17.03.2026
D307534576	Digital Electronic Balance	SATPL/WT/WL/39	FSC/2503/1801/005	15.03.2025	14.03.2026
NA	Digital Spectrophotometer Model	SATPL/WT/UV/30		Inhouse Calibration	

For Shreeji Aqua Treatment Pvt. Ltd.



SJM
Managing Director
Authorized Signatory

— End of Test Report —

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Page 2 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: T&A, Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/05131	Test Report Date	31/05/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM – GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	28/05/2025	Analysis Period	28/05/2025 To 31/05/2024

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Near Siddhartha Caves, Suria
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	31.0
Average Relative Humidity [%]	78

ANALYSIS REPORT :-

Parameters	Unit	Results	*N.A.A.Q.S.	Methods
PM ₁₀	µg/m ³	47.16	100.0	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	µg/m ³	19.50	60.0	NAAQMS/36/2012-2013 Volume 1
SO ₂	µg/m ³	8.94	80.0	IS 5182 (Part II) 2012
NO ₂	µg/m ³	11.18	80.0	IS 5182 (Part VI) 2012
CO	mg/m ³	0.21	4.0 for 1 Hrs.	IS 5182 (Part X) 1999
Lead	µg/m ³	< 0.01	1.0	NAAQMS/36/2012-2013 Volume 1
Ozone	µg/m ³	< 20.0	180.0 for 1 Hrs.	APHA Method 411 3 rd Edition
Ammonia	µg/m ³	< 14.0	400.0	APHA Method 401 3 rd Edition
Benzene	µg/m ³	< 0.14	5.0**	IS 5182 (Part 11) 2006
Benzo Pyrene	ng/m ³	< 0.1	1.0**	IS 5182 (Part 12):2004
Arsenic	ng/m ³	< 0.7	6.0**	NAAQMS/36/2012-2013 Volume 1
Nickel	ng/m ³	< 6.0	20.0**	NAAQMS/36/2012-2013 Volume 1

*N.A.A.Q.S. – National Ambient Air Quality Standards.

End

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6. Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	NAAQMS/36/2012-2013 Volume 1
SO ₂	IS 5182 (Part II) 2012
NO ₂	IS 5182 (Part VI) 2012
CO	IS 5182 (Part X) 1999
Lead (Pb)	NAAQMS/36/2012-2013 Volume 1
Ozone (O ₃)	APHA Method 411 3 rd Edition
Ammonia (NH ₃)	APHA Method 401 3 rd Edition
Benzene (C ₆ H ₆)	IS 5182 (Part 11) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part 12):2004
Arsenic (As)	NAAQMS/36/2012-2013 Volume 1
Nickel (Ni)	NAAQMS/36/2012-2013 Volume 1

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 721-J-23	12/12/2024	20/12/2025
2	Fine Particulate Sampler - Sr. No. 1372-J-23	19/12/2024	18/12/2025
3	Digital Electronic Balance – Sr. No. GL/IN/Bal-02	29/06/2024	28/06/2025
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/05130	Test Report Date	31/05/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM – GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	28/05/2025	Analysis Period	28/05/2025 To 31/05/2024

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Near Mosque, Surla
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	31.0
Average Relative Humidity [%]	78

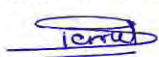
ANALYSIS REPORT :-


Parameters	Unit	Results	*N.A.A.Q.S.	Methods
PM ₁₀	µg/m ³	41.22	100.0	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	µg/m ³	15.48	60.0	NAAQMS/36/2012-2013 Volume 1
SO ₂	µg/m ³	8.74	80.0	IS 5182 (Part II) 2012
NO ₂	µg/m ³	10.76	80.0	IS 5182 (Part VI) 2012
CO	mg/m ³	0.20	4.0 for 1 Hrs.	IS 5182 (Part X) 1999
Lead	µg/m ³	< 0.01	1.0	NAAQMS/36/2012-2013 Volume 1
Ozone	µg/m ³	< 20.0	180.0 for 1 Hrs.	APHA Method 411 3 rd Edition
Ammonia	µg/m ³	< 14.0	400.0	APHA Method 401 3 rd Edition
Benzene	µg/m ³	< 0.14	5.0**	IS 5182 (Part 11) 2006
Benzo Pyrene	ng/m ³	< 0.1	1.0**	IS 5182 (Part 12):2004
Arsenic	ng/m ³	< 0.7	6.0**	NAAQMS/36/2012-2013 Volume 1
Nickel	ng/m ³	< 6.0	20.0**	NAAQMS/36/2012-2013 Volume 1

*N.A.A.Q.S. – National Ambient Air Quality Standards.

End

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	NAAQMS/36/2012-2013 Volume 1
SO ₂	IS 5182 (Part II) 2012
NO ₂	IS 5182 (Part VI) 2012
CO	IS 5182 (Part X) 1999
Lead (Pb)	NAAQMS/36/2012-2013 Volume 1
Ozone (O ₃)	APHA Method 411 3 rd Edition
Ammonia (NH ₃)	APHA Method 401 3 rd Edition
Benzene (C ₆ H ₆)	IS 5182 (Part 11) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part 12):2004
Arsenic (As)	NAAQMS/36/2012-2013 Volume 1
Nickel (Ni)	NAAQMS/36/2012-2013 Volume 1

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 722-J-23	12/12/2024	20/12/2025
2	Fine Particulate Sampler - Sr. No. 1372-J-23	19/12/2024	18/12/2025
3	Digital Electronic Balance – Sr. No. GL/IN/Bal-02	29/06/2024	28/06/2025
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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Doc.No : GLPL/QF/7.8/03

TEST REPORT

Test Report No.	GA/VEN/25/06091	Test Report Date	25/06/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM – GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	20/06/2025	Analysis Period	21/06/2025 To 25/06/2025

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Near Siddhartha Caves, Surla
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	29
Average Relative Humidity [%]	85

ANALYSIS REPORT :-

Parameters	Unit	Results	*N.A.A.Q.S.	Methods
PM ₁₀	µg/m ³	42.36	100.0	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	µg/m ³	17.26	60.0	NAAQMS/36/2012-2013 Volume 1
SO ₂	µg/m ³	8.44	80.0	IS 5182 (Part II) 2012
NO ₂	µg/m ³	10.48	80.0	IS 5182 (Part VI) 2012
CO	mg/m ³	0.23	4.0 for 1 Hrs.	IS 5182 (Part X) 1999
Lead	µg/m ³	< 0.01	1.0	NAAQMS/36/2012-2013 Volume 1
Ozone	µg/m ³	< 20.0	180.0 for 1 Hrs.	APHA Method 411 3 rd Edition
Ammonia	µg/m ³	< 14.0	400.0	APHA Method 401 3 rd Edition
Benzene	µg/m ³	< 0.14	5.0**	IS 5182 (Part 11) 2006
Benzo Pyrene	ng/m ³	< 0.1	1.0**	IS 5182 (Part 12):2004
Arsenic	ng/m ³	< 0.7	6.0**	NAAQMS/36/2012-2013 Volume 1
Nickel	ng/m ³	< 6.0	20.0**	NAAQMS/36/2012-2013 Volume 1

*N.A.A.Q.S. – National Ambient Air Quality Standards.

End

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	NAAQMS/36/2012-2013 Volume 1
SO ₂	IS 5182 (Part II) 2012
NO ₂	IS 5182 (Part VI) 2012
CO	IS 5182 (Part X) 1999
Lead (Pb)	NAAQMS/36/2012-2013 Volume 1
Ozone (O ₃)	APHA Method 411 3 rd Edition
Ammonia (NH ₃)	APHA Method 401 3 rd Edition
Benzene (C ₆ H ₆)	IS 5182 (Part 11) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part 12):2004
Arsenic (As)	NAAQMS/36/2012-2013 Volume 1
Nickel (Ni)	NAAQMS/36/2012-2013 Volume 1

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 721-J-23	12/12/2024	20/12/2025
2	Fine Particulate Sampler - Sr. No. 1372-J-23	19/12/2024	18/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/06092	Test Report Date	25/06/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM – GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	20/06/2025	Analysis Period	21/06/2025 To 25/06/2025

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Near Mosque, Surla
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	29
Average Relative Humidity [%]	85

ANALYSIS REPORT :-

Parameters	Unit	Results	*N.A.A.Q.S.	Methods
PM ₁₀	µg/m ³	37.44	100.0	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	µg/m ³	15.16	60.0	NAAQMS/36/2012-2013 Volume 1
SO ₂	µg/m ³	8.54	80.0	IS 5182 (Part II) 2012
NO ₂	µg/m ³	10.62	80.0	IS 5182 (Part VI) 2012
CO	mg/m ³	0.21	4.0 for 1 Hrs.	IS 5182 (Part X) 1999
Lead	µg/m ³	< 0.01	1.0	NAAQMS/36/2012-2013 Volume 1
Ozone	µg/m ³	< 20.0	180.0 for 1 Hrs.	APHA Method 411 3 rd Edition
Ammonia	µg/m ³	< 14.0	400.0	APHA Method 401 3 rd Edition
Benzene	µg/m ³	< 0.14	5.0**	IS 5182 (Part 11) 2006
Benzo Pyrene	ng/m ³	< 0.1	1.0**	IS 5182 (Part 12):2004
Arsenic	ng/m ³	< 0.7	6.0**	NAAQMS/36/2012-2013 Volume 1
Nickel	ng/m ³	< 6.0	20.0**	NAAQMS/36/2012-2013 Volume 1

*N.A.A.Q.S. – National Ambient Air Quality Standards.

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Test methods of analyzed parameters

Parameters	Methods
PM ₁₀	NAAQMS/36/2012-2013 Volume 1
PM _{2.5}	NAAQMS/36/2012-2013 Volume 1
SO ₂	IS 5182 (Part II) 2012
NO ₂	IS 5182 (Part VI) 2012
CO	IS 5182 (Part X) 1999
Lead (Pb)	NAAQMS/36/2012-2013 Volume 1
Ozone (O ₃)	APHA Method 411 3 rd Edition
Ammonia (NH ₃)	APHA Method 401 3 rd Edition
Benzene (C ₆ H ₆)	IS 5182 (Part 11) 2006
Benzo Pyrene (B(a)P)	IS 5182 (Part 12):2004
Arsenic (As)	NAAQMS/36/2012-2013 Volume 1
Nickel (Ni)	NAAQMS/36/2012-2013 Volume 1

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 722-J-23	12/12/2024	20/12/2025
2	Fine Particulate Sampler - Sr. No. 1372-J-23	19/12/2024	18/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

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Tel. : (02362) 223519 • E-mail : info@gadark.in • Website : www.gadark.in

OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0797	Test Report Date	26/07/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM – GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	22/07/2025	Analysis Period	23/07/2025 To 26/07/2025

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Near Siddhartha Caves, Surla
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	91

ANALYSIS REPORT :-

Parameters	Unit	Results	*N.A.A.Q.S.	Methods
PM ₁₀	µg/m ³	35.13	100.0	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	15.28	60.0	IS 5182 (Part XXIV) 2019
SO ₂	µg/m ³	8.14	80.0	IS 5182 (Part II) 2001
NO ₂	µg/m ³	10.14	80.0	IS 5182 (Part VI) 2006
CO	mg/m ³	0.22	4.0 for 1 Hrs.	IS 5182 (Part X) 1999
Lead	µg/m ³	<0.0004	1.0	IS 5182 (Part XXII) 2004
Ozone	µg/m ³	< 0.006	180.0 for 1 Hrs.	ISC Method of Air Sampling & Analysis 3 rd Edition Method 411 2016
Ammonia	µg/m ³	< 0.3	400.0	ISC Method of Air Sampling & Analysis 3 rd Edition Method 401 2016
Benzene	µg/m ³	< 1.0	5.0**	IS 5182 (Part XI) 2006
Benzo Pyrene	ng/m ³	< 0.1	1.0**	IS 5182 (Part XII):2004
Arsenic	ng/m ³	< 0.4	6.0**	IS 5182 (Part XXII):2004
Nickel	ng/m ³	< 0.4	20.0**	IS 5182 (Part XXI):2020

*N.A.A.Q.S. – National Ambient Air Quality Standards.

End

For GADARKLAB PVT. LTD.


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Note :

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4. Test Results relate only to the conditions prevailing at the time of sampling
5. Customer complaint register is available at laboratory.
6. Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 721-J-23	12/12/2024	20/12/2025
2	Fine Particulate Sampler - Sr. No. 1372-J-23	19/12/2024	18/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0798	Test Report Date	26/07/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM – GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	22/07/2025	Analysis Period	23/07/2025 To 26/07/2025

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Near Mosque, Surla
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	91

ANALYSIS REPORT :-

Parameters	Unit	Results	*N.A.A.Q.S.	Methods
PM ₁₀	µg/m ³	36.26	100.0	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	14.22	60.0	IS 5182 (Part XXIV) 2019
SO ₂	µg/m ³	8.44	80.0	IS 5182 (Part II) 2001
NO ₂	µg/m ³	10.30	80.0	IS 5182 (Part VI) 2006
CO	mg/m ³	0.21	4.0 for 1 Hrs.	IS 5182 (Part X) 1999
Lead	µg/m ³	< 0.0004	1.0	IS 5182 (Part XXII) 2004
Ozone	µg/m ³	< 0.006	180.0 for 1 Hrs.	ISC Method of Air Sampling & Analysis 3 rd Edition Method 411 2016
Ammonia	µg/m ³	< 0.3	400.0	ISC Method of Air Sampling & Analysis 3 rd Edition Method 401 2016
Benzene	µg/m ³	< 1.0	5.0**	IS 5182 (Part XI) 2006
Benzo Pyrene	ng/m ³	< 0.1	1.0**	IS 5182 (Part XII):2004
Arsenic	ng/m ³	< 0.4	6.0**	IS 5182 (Part XXII):2004
Nickel	ng/m ³	< 0.4	20.0**	IS 5182 (Part XXI):2020

*N.A.A.Q.S. – National Ambient Air Quality Standards.

End

For GADARK LAB PVT. LTD.

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 722-J-23	12/12/2024	20/12/2025
2	Fine Particulate Sampler - Sr. No. 1372-J-23	19/12/2024	18/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	03/05/2025	02/08/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0890	Test Report Date	25/08/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM – GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	21/08/2025	Analysis Period	21/08/2025 To 25/08/2025

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Near Siddhartha Caves, Surla
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	92

ANALYSIS REPORT :-

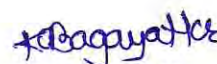
Parameters	Unit	Results	*N.A.A.Q.S.	Methods
PM ₁₀	µg/m ³	36.46	100.0	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	15.86	60.0	IS 5182 (Part XXIV) 2019
SO ₂	µg/m ³	8.26	80.0	IS 5182 (Part II) 2001
NO ₂	µg/m ³	10.29	80.0	IS 5182 (Part VI) 2006
CO	mg/m ³	0.70	4.0 for 1 Hrs.	IS 5182 (Part X) 1999
Lead	µg/m ³	0.03	1.0	IS 5182 (Part XXII) 2004
Ozone	µg/m ³	9.69	180.0 for 1 Hrs.	ISC Method of Air Sampling & Analysis 3 rd Edition Method 411 2016
Ammonia	µg/m ³	14.57	400.0	ISC Method of Air Sampling & Analysis 3 rd Edition Method 401 2016
Benzene	µg/m ³	< 1.0	5.0**	IS 5182 (Part XI) 2006
Benzo Pyrene	ng/m ³	< 0.1	1.0**	IS 5182 (Part XII):2004
Arsenic	ng/m ³	< 0.4	6.0**	IS 5182 (Part XXII):2004
Nickel	ng/m ³	1.85	20.0**	IS 5182 (Part XXI):2020

*N.A.A.Q.S. – National Ambient Air Quality Standards.

End

For GADARKLAB PVT. LTD.


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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 721-J-23	12/12/2024	20/12/2025
2	Fine Particulate Sampler - Sr. No. 1372-J-23	19/12/2024	18/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	04/08/2025	03/11/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0891	Test Report Date	25/08/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM – GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	21/08/2025	Analysis Period	21/08/2025 To 25/08/2025

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Near Mosque, Surla
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	92

ANALYSIS REPORT :-

Parameters	Unit	Results	*N.A.A.Q.S.	Methods
PM ₁₀	µg/m ³	37.08	100.0	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	16.31	60.0	IS 5182 (Part XXIV) 2019
SO ₂	µg/m ³	8.48	80.0	IS 5182 (Part II) 2001
NO ₂	µg/m ³	10.42	80.0	IS 5182 (Part VI) 2006
CO	mg/m ³	0.65	4.0 for 1 Hrs.	IS 5182 (Part X) 1999
Lead	µg/m ³	0.03	1.0	IS 5182 (Part XXII) 2004
Ozone	µg/m ³	9.46	180.0 for 1 Hrs.	ISC Method of Air Sampling & Analysis 3 rd Edition Method 411 2016
Ammonia	µg/m ³	14.84	400.0	ISC Method of Air Sampling & Analysis 3 rd Edition Method 401 2016
Benzene	µg/m ³	< 1.0	5.0**	IS 5182 (Part XI) 2006
Benzo Pyrene	ng/m ³	< 0.1	1.0**	IS 5182 (Part XII):2004
Arsenic	ng/m ³	< 0.4	6.0**	IS 5182 (Part XXII):2004
Nickel	ng/m ³	2.35	20.0**	IS 5182 (Part XXI):2020

*N.A.A.Q.S. – National Ambient Air Quality Standards.

End

For GADARK LAB PVT. LTD.

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 722-J-23	12/12/2024	20/12/2025
2	Fine Particulate Sampler - Sr. No. 1372-J-23	19/12/2024	18/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	04/08/2025	03/11/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/1003	Test Report Date	19/09/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM – GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	16/09/2025	Analysis Period	16/09/2025 To 19/09/2025

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Near Siddhartha Caves, Surla
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	90

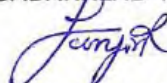
ANALYSIS REPORT :-

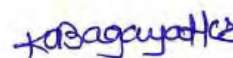
Parameters	Unit	Results	*N.A.A.Q.S.	Methods
PM ₁₀	µg/m ³	37.49	100.0	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	17.23	60.0	IS 5182 (Part XXIV) 2019
SO ₂	µg/m ³	< 20	80.0	IS 5182 (Part II) 2001
NO ₂	µg/m ³	10.04	80.0	IS 5182 (Part VI) 2006
CO	mg/m ³	0.62	4.0 for 1 Hrs.	IS 5182 (Part X) 1999
Lead	µg/m ³	0.06	1.0	IS 5182 (Part XXII) 2004
Ozone	µg/m ³	< 20	180.0 for 1 Hrs.	IS 5182 (Part IX) 2019
Ammonia	µg/m ³	< 20	400.0	IS 5182 (Part XXV) 2018
Benzene	µg/m ³	< 1.0	5.0**	IS 5182 (Part XI) 2006
Benzo Pyrene	ng/m ³	< 0.5	1.0**	IS 5182 (Part XII):2004
Arsenic	ng/m ³	< 0.4	6.0**	IS 5182 (Part XXII):2004
Nickel	ng/m ³	1.35	20.0**	IS 5182 (Part XXI):2020

*N.A.A.Q.S. – National Ambient Air Quality Standards.

End

For GADARK LAB PVT. LTD.


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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 721-J-23	12/12/2024	20/12/2025
2	Fine Particulate Sampler - Sr. No. 1372-J-23	19/12/2024	18/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	04/08/2025	03/11/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	



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TEST REPORT

Doc.No: GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/1004	Test Report Date	19/09/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM – GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	16/09/2025	Analysis Period	16/09/2025 To 19/09/2025

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Near Mosque, Surla
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	27
Average Relative Humidity [%]	90


ANALYSIS REPORT :-

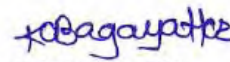
Parameters	Unit	Results	*N.A.A.Q.S.	Methods
PM ₁₀	µg/m ³	38.46	100.0	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	16.94	60.0	IS 5182 (Part XXIV) 2019
SO ₂	µg/m ³	< 20	80.0	IS 5182 (Part II) 2001
NO ₂	µg/m ³	10.29	80.0	IS 5182 (Part VI) 2006
CO	mg/m ³	0.61	4.0 for 1 Hrs.	IS 5182 (Part X) 1999
Lead	µg/m ³	0.04	1.0	IS 5182 (Part XXII) 2004
Ozone	µg/m ³	< 20	180.0 for 1 Hrs.	IS 5182 (Part IX) 2019
Ammonia	µg/m ³	< 20	400.0	IS 5182 (Part XXV) 2018
Benzene	µg/m ³	< 1.0	5.0**	IS 5182 (Part XI) 2006
Benzo Pyrene	ng/m ³	< 0.5	1.0**	IS 5182 (Part XII):2004
Arsenic	ng/m ³	< 0.4	6.0**	IS 5182 (Part XXII):2004
Nickel	ng/m ³	< 0.4	20.0**	IS 5182 (Part XXI):2020

*N.A.A.Q.S. – National Ambient Air Quality Standards.

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For GADARK LAB PVT. LTD.


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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Respirable Dust Sample - Sr. No. 722-J-23	12/12/2024	20/12/2025
2	Fine Particulate Sampler - Sr. No. 1372-J-23	19/12/2024	18/12/2025
3	Analytical Balance (GL/E/BAL/02)	10/06/2025	09/06/2026
4	Gas Chromatograph – Model Thermo-Fisher, Trace 1110	10/05/2025	09/05/2026
5	UV Spectrophotometer Model – UV - 3092, ID No. GL/EQ/UV2	04/08/2025	03/11/2025
6	ICP – OES , Thermo-fisher	Inhouse Calibration	

Annexure XI
River water quality analysis report



|| Shreeji ||

SHREEJI AQUA TREATMENT PVT. LTD.

Innovative Environmental Solutions Under One Roof

Accredited by NABL as per ISO/IEC 17025:2017

Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi


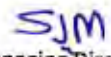
• ENVIRONMENT • FOOD • ANIMAL FOOD & FEED • MICROBIOLOGY



TC-13877

Laboratory Recognized by Ministry of Environment, Forest & Climate Change, Govt. of India & NABL Valid Up to 13/06/2026.

ULR No.: TC138772500008370F

TEST REPORT					
					14/04/2025
Sample / Report No.	SL/25-26/04/MWW/94AB				
Name of Customer	M/s. VEDANTA LIMITED (MET COKE DIVISION I)				
Address of Customer	(WASTE HEAT RECOVERY POWER PLANT – I) SURVEY NO. 205,206,207, 31/1, PART OF 177,44,43/1,43/2, & 42/1 & 74,SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.				
Order / Reference	As per TRF Dated 08/04/2025				
Sample declaration as provided by customer :					
Nature of Sample	River downstream sample (100 mtrs. downstream from discharge point)				
Batch No.	NA				
Sample Drawn by	SATPL Team on 08/04/2025	Sample Received On	09/04/2025		
Start of Analysis	09/04/2025	End of Analysis	14/04/2025		
Sample Container	Plastic Can	Sample Quantity	02 lit.		
Sampling Procedure	APHA 1060 (Part B)				
Limits	GSPCB Consent No. 12/2024-PCB/2305158/R00015723 AS per Class SW – II Waters				
Chemical Testing					
Sr.No	Parameters	Results	Limits	Unit	Method
1	pH	7.30	6.5-8.5	—	APHA, 24 th Edition 2023/ 4500-H+B
2	Dissolved Oxygen	6.0	>4.0	mg/L	APHA, 24 th Edition 2023/ 4500-B&C
3	Turbidity	6.4	<30.0	NTU	APHA 24th edition: 2130-B: 2023
4	Bio Chemical Oxygen Demand (BOD) @ 27°C for 3 Days	2.4	<3.0	mg/L	IS 3025 (Part 44):2023
5	Temperature	27.5	—	°C	IS 3025(Part 9): 2023
Note: NA-Not Applicable.					
REMARK: Reference to above testing parameters, given River downstream sample is within the prescribed limit.					
Disclaimer: 'Information is supplied by customers represented in italic font'					
				For Shreeji Aqua Treatment Pvt. Ltd.	
				 Managing Director Authorized Signatory	

A part of the report has been generated on the next page. The results relate to sample tested.

Page 1 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4,Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

Vadodara: Plot No.1, Shah Ind. Park-1, Vadodara-Savli, Lamdapura. 391 775 Dist. Vadodra

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TEST REPORT

14/04/2025

14/04/2025

Sample / Report No.	SL/25-26/04/MWW/94AB		
Name of Customer	M/s. VEDANTA LIMITED (MET COKE DIVISION I)		
Address of Customer	(WASTE HEAT RECOVERY POWER PLANT – I) SURVEY NO. 205,206,207, 31/1, PART OF 177,44,43/1,43/2, & 42/1 & 74,SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Order / Reference	As per TRF Dated 08/04/2025		
Sample declaration as provided by customer :			
Nature of Sample	River downstream sample (100 mtrs. downstream from discharge point)		
Batch No.	NA		
Sample Drawn by	SATPL Team on 08/04/2025	Sample Received On	09/04/2025
Start of Analysis	09/04/2025	End of Analysis	14/04/2025
Sample Container	Sterile Plastic Bottle	Sample Quantity	100 ml
Sampling Procedure	APHA 1060 (Part B)		
Limits	GSPCB Consent No. 12/2024-PCB/2305158/R00015723 AS per Class SW – II Waters		

Biological Testing

Sr.No	Parameters	Results	Limits	Unit	Method
1	Fecal coliform	80.0	<100.0	MPN/100 ml	IS (1622):1981R2019

Note: NA-Not Applicable.

REMARK: Reference to above testing parameters, given River downstream sample is within the prescribed limit.

Disclaimer: 'Information is supplied by customers represented in italic font'

EQUIPMENT CALIBRATION DETAILS

Sr. No.	Equipment Name	Equipment ID	Certificate No.	Calibration Detail	
				Calibrated Date	Calibration Due Date
-----	pH Meter	SATPL/WT/pHM/02	FSC/2503/1801/037	18-03-2025	17-03-2026
D307534576	Analytical Weighing Balance	SATPL/WT/WL/06	FSC/2503/1801/005	18-03-2025	17-03-2026
1022-048	COD Digestion Apparatus	SATPL/WT/CD-/08/DT	FSC/2503/1801/009	18-03-2025	17-03-2026
-----	BOD Incubator	SATPL/WT/BODI /09 /TCS	FSC/2503/1801/010	18-03-2025	17-03-2026
-----	Oven	SATPL/WT/HAO/04 / TCS	FSC/2503/1801/001	18-03-2025	17-03-2026
66050	Water Bath	SATPL/WT/WB/07 / TCS	FSC/2503/1801/006	18-03-2025	17-03-2026
10242	Autoclave	SATPL/MB/AC-01/43 /TCS	ATC/250318/020	18-03-2025	17-03-2026

For Shreeji Aqua Treatment Pvt. Ltd.



SJM
Managing Director
Authorized Signatory

—End of Test Report—

The results relate to sample tested.

Page 2 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

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ULR No.: TC138772500008371F

TEST REPORT						14/04/2025
Sample / Report No.		SL/25-26/04/MWW/94AC				
Name of Customer		M/s. VEDANTA LIMITED (MET COKE DIVISION I)				
Address of Customer		(WASTE HEAT RECOVERY POWER PLANT – I) SURVEY NO. 205,206,207, 31/1, PART OF 177,44,43/1,43/2, & 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.				
Order / Reference		As per TRF Dated 08/04/2025				
Sample declaration as provided by customer :						
Nature of Sample		River upstream sample (100 mtrs. upstream from discharge point)				
Batch No.		NA				
Sample Drawn by		SATPL Team on 08/04/2025	Sample Received On		09/04/2025	
Start of Analysis		09/04/2025	End of Analysis		14/04/2025	
Sample Container		Plastic Can	Sample Quantity		02 lit.	
Sampling Procedure		APHA 1060 (Part B)				
Limits		GSPCB Consent No. 12/2024-PCB/2305158/R00015723 AS per Class SW – II Waters				
Chemical Testing						
Sr.No	Parameters	Results	Limits	Unit	Method	
1	pH	7.38	6.5-8.5	---	APHA, 24 th Edition 2023/ 4500-H+B	
2	Dissolved Oxygen	6.9	>4.0	mg/L	APHA, 24 th Edition 2023/ 4500-B&C	
3	Turbidity	6.2	<30.0	NTU	APHA 24th edition: 2130-B: 2023	
4	Bio Chemical Oxygen Demand (BOD) @ 27°C for 3 Days	2.1	<3.0	mg/L	IS 3025 (Part 44):2023	
5	Temperature	27.5	---	°C	IS 3025(Part 9): 2023	
Note: NA-Not Applicable.						
REMARK: Reference to above testing parameters, given River upstream sample is within the prescribed limit.						
Disclaimer: 'Information is supplied by customers represented in italic font'						
				For Shreeji Aqua Treatment Pvt. Ltd.		
						

A part of the report has been generated on the next page. The results relate to sample tested.

Page 1 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4,Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

Vadodara: Plot No.1, Shah Ind. Park-1, Vadodara-Savli, Lamdapura. 391 775 Dist. Vadodra

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TEST REPORT

14/04/2025

Sample / Report No.	SL/25-26/04/MWW/94AC		
Name of Customer	M/s. VEDANTA LIMITED (MET COKE DIVISION I)		
Address of Customer	(WASTE HEAT RECOVERY POWER PLANT – I) SURVEY NO. 205,206,207, 31/1, PART OF 177,44,43/1,43/2, & 42/1 & 74,SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Order / Reference	As per TRF Dated 08/04/2025		
Sample declaration as provided by customer :			
Nature of Sample	River upstream sample (100 mtrs. upstream from discharge point)		
Batch No.	NA		
Sample Drawn by	SATPL Team on 08/04/2025	Sample Received On	09/04/2025
Start of Analysis	09/04/2025	End of Analysis	14/04/2025
Sample Container	Sterile Plastic Bottle	Sample Quantity	100 ml
Sampling Procedure	APHA 1060 (Part B)		
Limits	GSPCB Consent No. 12/2024-PCB/2305158/R00015723 AS per Class SW – II Waters		

Biological Testing

Sr.No	Parameters	Results	Limits	Unit	Method
1	Fecal coliform	70.0	<100.0	MPN/100 ml	IS (1622):1981R2019

Note: NA-Not Applicable.

REMARK: Reference to above testing parameters, given River upstream sample is within the prescribed limit.

Disclaimer: 'Information is supplied by customers represented in italic font'

EQUIPMENT CALIBRATION DETAILS

Sr. No.	Equipment Name	Equipment ID	Certificate No.	Calibration Detail	
				Calibrated Date	Calibration Due Date
-----	pH Meter	SATPL/WT/pHM/02	FSC/2503/1801/037	18-03-2025	17-03-2026
D307534576	Analytical Weighing Balance	SATPL/WT/WL/06	FSC/2503/1801/005	18-03-2025	17-03-2026
1022-048	COD Digestion Apparatus	SATPL/WT/CD-/08/DT	FSC/2503/1801/009	18-03-2025	17-03-2026
-----	BOD Incubator	SATPL/WT/BODI-/09/TCS	FSC/2503/1801/010	18-03-2025	17-03-2026
-----	Oven	SATPL/WT/HAO/04/TCS	FSC/2503/1801/001	18-03-2025	17-03-2026
66050	Water Bath	SATPL/WT/WB/07/TCS	FSC/2503/1801/006	18-03-2025	17-03-2026
10242	Autoclave	SATPL/MB/AC-01/43/TCS	ATC/250318/020	18-03-2025	17-03-2026

For Shreeji Aqua Treatment Pvt. Ltd.



SJM

Managing Director
Authorized Signatory

-----End of Test Report-----

The results relate to sample tested.

Page 2 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

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ULR No.: TC138772500008375F

TEST REPORT					
28/04/2025					
Sample / Report No.	SL/25-26/04/MWW/181R				
Name of Customer	M/s. VEDANTA LIMITED (MET COKE DIVISION I)				
Address of Customer	(WASTE HEAT RECOVERY POWER PLANT – I) SURVEY NO. 205,206,207, 31/1, PART OF 177,44,43/1,43/2, & 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.				
Order / Reference	As per TRF Dated 22/04/2025				
Sample declaration as provided by customer :					
Nature of Sample	River downstream sample (100 mtrs. downstream from discharge point)				
Batch No.	NA				
Sample Drawn by	SATPL Team on 22/04/2025	Sample Received On	23/04/2025		
Start of Analysis	23/04/2025	End of Analysis	28/04/2025		
Sample Container	Plastic Can	Sample Quantity	02 lit.		
Sampling Procedure	APHA 1060 (Part B)				
Limits	GSPCB Consent No. 12/2024-PCB/2305158/R00015723 AS per Class SW – II Waters				
Chemical Testing					
Sr.No	Parameters	Results	Limits	Unit	Method
1	pH	7.30	6.5-8.5	-----	APHA, 24 th Edition 2023/ 4500-H+B
2	Dissolved Oxygen	6.0	>4.0	mg/L	APHA, 24 th Edition 2023/ 4500-B&C
3	Turbidity	6.4	<30.0	NTU	APHA 24th edition: 2130-B: 2023
4	Bio Chemical Oxygen Demand (BOD) @ 27°C for 3 Days	2.6	<3.0	mg/L	IS 3025 (Part 44):2023
5	Temperature	27.5	-----	°C	IS 3025(Part 9): 2023
Note: NA-Not Applicable.					
REMARK: Reference to above testing parameters, given River downstream sample is within the prescribed limit.					
Disclaimer: 'Information is supplied by customers represented in italic font'					
			For Shreeji Aqua Treatment Pvt. Ltd.		
			 Managing Director Authorized Signatory		

A part of the report has been generated on the next page. The results relate to sample tested.

Page 1 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4, Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

Vadodara: Plot No.1, Shah Ind. Park-1, Vadodara-Savli, Lamdapura. 391 775 Dist. Vadodra

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TEST REPORT

28/04/2025

Sample / Report No.	SL/25-26/04/MWW/181R		
Name of Customer	M/s. VEDANTA LIMITED (MET COKE DIVISION I)		
Address of Customer	(WASTE HEAT RECOVERY POWER PLANT – I) SURVEY NO. 205,206,207, 31/1, PART OF 177,44,43/1,43/2, & 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Order / Reference	As per TRF Dated 22/04/2025		
Sample declaration as provided by customer :			
Nature of Sample	River downstream sample (100 mtrs. downstream from discharge point)		
Batch No.	NA		
Sample Drawn by	SATPL Team on 22/04/2025	Sample Received On	23/04/2025
Start of Analysis	23/04/2025	End of Analysis	28/04/2025
Sample Container	Sterile Plastic Bottle	Sample Quantity	100 ml
Sampling Procedure	APHA 1060 (Part B)		
Limits	GSPCB Consent No. 12/2024-PCB/2305158/R00015723 AS per Class SW – II Waters		

Biological Testing

Sr.No	Parameters	Results	Limits	Unit	Method
1	Fecal coliform	60.0	<100.0	MPN/100 ml	IS (1622):1981R2019

Note: NA-Not Applicable.

REMARK: Reference to above testing parameters, given River downstream sample is within the prescribed limit.

Disclaimer: 'Information is supplied by customers represented in italic font'

EQUIPMENT CALIBRATION DETAILS

Sr. No.	Equipment Name	Equipment ID	Certificate No.	Calibration Detail	
				Calibrated Date	Calibration Due Date
—	pH Meter	SATPL/WT/pHM/02	FSC/2503/1801/037	18-03-2025	17-03-2026
D307534576	Analytical Weighing Balance	SATPL/WT/WL/06	FSC/2503/1801/005	18-03-2025	17-03-2026
1022-048	COD Digestion Apparatus	SATPL/WT/CD-/08/DT	FSC/2503/1801/009	18-03-2025	17-03-2026
—	BOD Incubator	SATPL/WT/BODI-/09/TCS	FSC/2503/1801/010	18-03-2025	17-03-2026
—	Oven	SATPL/WT/HAO/04/TCS	FSC/2503/1801/001	18-03-2025	17-03-2026
66050	Water Bath	SATPL/WT/WB/07/TCS	FSC/2503/1801/006	18-03-2025	17-03-2026
10242	Autoclave	SATPL/MB/AC-01/43/TCS	ATC/250318/020	18-03-2025	17-03-2026

For Shreeji Aqua Treatment Pvt. Ltd.



SJM
Managing Director
Authorized Signatory

—End of Test Report—

The results relate to sample tested.

Page 2 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4, Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

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ULR No.: TC138772500008374F

TEST REPORT					
					28/04/2025
Sample / Report No.	SL/25-26/04/MWW/181Q				
Name of Customer	M/s. VEDANTA LIMITED (MET COKE DIVISION I)				
Address of Customer	(WASTE HEAT RECOVERY POWER PLANT – I) SURVEY NO. 205,206,207, 31/1, PART OF 177,44,43/1,43/2, & 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.				
Order / Reference	As per TRF Dated 22/04/2025				
Sample declaration as provided by customer :					
Nature of Sample	River upstream sample (100 mtrs. upstream from discharge point)				
Batch No.	NA				
Sample Drawn by	SATPL Team on 22/04/2025	Sample Received On	23/04/2025		
Start of Analysis	23/04/2025	End of Analysis	28/04/2025		
Sample Container	Plastic Can	Sample Quantity	02 lit.		
Sampling Procedure	APHA 1060 (Part B)				
Limits	GSPCB Consent No. 12/2024-PCB/2305158/R00015723 AS per Class SW – II Waters				
Chemical Testing					
Sr.No	Parameters	Results	Limits	Unit	Method
1	pH	7.49	6.5-8.5	----	APHA, 24 th Edition 2023/ 4500-H+B
2	Dissolved Oxygen	6.5	>4.0	mg/L	APHA, 24 th Edition 2023/ 4500-B&C
3	Turbidity	5.8	<30.0	NTU	APHA 24th edition: 2130-B: 2023
4	Bio Chemical Oxygen Demand (BOD) @ 27°C for 3 Days	2.3	<3.0	mg/L	IS 3025 (Part 44):2023
5	Temperature	27.8	----	°C	IS 3025(Part 9): 2023
Note: NA-Not Applicable.					
REMARK: Reference to above testing parameters, given River upstream sample is within the prescribed limit.					
Disclaimer: 'Information is supplied by customers represented in italic font'					
			For Shreeji Aqua Treatment Pvt. Ltd.		
			 Managing Director Authorized Signatory		

A part of the report has been generated on the next page. The results relate to sample tested.

Page 1 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

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TEST REPORT

28/04/2025

Sample / Report No.	SL/25-26/04/MWW/181Q
Name of Customer	M/s. VEDANTA LIMITED (MET COKE DIVISION I)
Address of Customer	(WASTE HEAT RECOVERY POWER PLANT – I) SURVEY NO. 205,206,207, 31/1, PART OF 177,44,43/1,43/2, & 42/1 & 74,SURVEY NO. 207 (PART) OF NAVEIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.
Order / Reference	As per TRF Dated 22/04/2025

Sample declaration as provided by customer :

Nature of Sample *River upstream sample (100 mtrs. upstream from discharge point)*

Batch No. NA

Sample Drawn by SATPL Team on 22/04/2025 Sample Received On 23/04/2025

Start of Analysis 23/04/2025 End of Analysis 28/04/2025

Sample Container Sterile Plastic Bottle Sample Quantity 100 ml

Sampling Procedure APHA 1060 (Part B)

Limits GSPCB Consent No. 12/2024-PCB/2305158/R00015723
AS per Class SW – II Waters

Biological Testing

Sr.No	Parameters	Results	Limits	Unit	Method
1	Fecal coliform	50.0	<100.0	MPN/100 ml	IS (1622):1981R2019

Note: NA-Not Applicable.

REMARK: Reference to above testing parameters, given River upstream sample is within the prescribed limit.

Disclaimer: 'Information is supplied by customers represented in italic font'

EQUIPMENT CALIBRATION DETAILS

Sr. No.	Equipment Name	Equipment ID	Certificate No.	Calibration Detail	
				Calibrated Date	Calibration Due Date
—	pH Meter	SATPL/WT/pHM/02	FSC/2503/1801/037	18-03-2025	17-03-2026
D307534576	Analytical Weighing Balance	SATPL/WT/WL/06	FSC/2503/1801/005	18-03-2025	17-03-2026
1022-048	COD Digestion Apparatus	SATPL/WT/CD-/08/DT	FSC/2503/1801/009	18-03-2025	17-03-2026
—	BOD Incubator	SATPL/WT/BODI /09 /TCS	FSC/2503/1801/010	18-03-2025	17-03-2026
—	Oven	SATPL/WT/HAO/04 / TCS	FSC/2503/1801/001	18-03-2025	17-03-2026
66050	Water Bath	SATPL/WT/WB/07 / TCS	FSC/2503/1801/006	18-03-2025	17-03-2026
10242	Autoclave	SATPL/MB/AC-01/43 /TCS	ATC/250318/020	18-03-2025	17-03-2026

For Shreeji Aqua Treatment Pvt. Ltd.



SJM
Managing Director
Authorized Signatory

—End of Test Report—

The results relate to sample tested.

Page 2 of 2

Pune: Plot No. B-24, H Block, Lal Topi Nagar, Morewadi, MIDC, Pimpri-Chinchwad, Maharashtra 411018.

Lab: 1&4,Shreeji Terrace Apt. Plot No. 53, Purna Nagar, Chikhali, Pune: 411019

Vadodara: Plot No.1, Shah Ind. Park-1, Vadodara-Savli, Lamdapura. 391 775 Dist. Vadodra

Customer Care No.: +919225247365 Email: info@shreejiagua.com Web: www.shreejiagua.com

Shreeji Aqua is always subject to improvement for better customer satisfaction, we welcome your feedback on pune_lab@shreejiagua.com



GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0589	Test Report Date:	19/05/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 &74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0589	Page No.	1 of 1
Sampling Done On	GLPL On 15/05/2025	Sample Received on	15/05/2025
Sample Collected By	GLPL	Analysis Period	15/05/2025 To 19/05/2025
Sample Description	River Down Stream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:


Parameters	Units	Test Result	*Limits	Methods
pH	---	7.09	6.5 – 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.3	4.0	APHA 4500 O C (24 th Edition)
Fecal Coliform	MPN/100 ml	94	100	APHA 9221 E (24 th Edition)
Turbidity	NTU	6.5	30.0	APHA 2130 B (24 th Edition)


*Limits: GSPCB Consent No. 12/2024-PCB/2524810/R00017175.

General Standards for Discharge of Environmental Pollutants into Inland Surface water, as per the Environment (Protection) Rules, 1986..

End

For GADARK LAB PVT. LTD.


AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]


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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	29/06/2024	28/06/2025
3	COD Digester 01	28/06/2024	27/06/2025
4	COD Digester 02	28/06/2024	27/06/2025
5	BOD Incubator	28/06/2024	27/06/2025
6	Oven	28/06/2024	27/06/2025
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/EN/25/0588	Test Report Date:	19/05/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/EN/25/0588	Page No.	1 of 1
Sampling Done On	GLPL On 15/05/2025	Sample Received on	15/05/2025
Sample Collected By	GLPL	Analysis Period	15/05/2025 To 19/05/2025
Sample Description	River Upstream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.11	6.5 – 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.2	4.0	APHA 4500 O C (24 th Edition)
Fecal Coliform	MPN/100 ml	94	100	APHA 9221 E (24 th Edition)
Turbidity	NTU	6.6	30.0	APHA 2130 B (24 th Edition)

*Limits: GSPCB Consent No. 12/2024-PCB/2524810/R00017175.

General Standards for Discharge of Environmental Pollutants into Inland Surface water, as per the Environment (Protection) Rules, 1986.

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	29/06/2024	28/06/2025
3	COD Digester 01	28/06/2024	27/06/2025
4	COD Digester 02	28/06/2024	27/06/2025
5	BOD Incubator	28/06/2024	27/06/2025
6	Oven	28/06/2024	27/06/2025
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0592	Test Report Date:	05/06/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM - GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0592	Page No.	1 of 1
Sampling Done On	GLPL On 29/05/2025	Sample Received on	30/05/2025
Sample Collected By	GLPL	Analysis Period	30/05/2025 To 05/06/2025
Sample Description	River Upstream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.21	6.5 - 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.1	4.0	APHA 4500 O C (24 th Edition)
Fecal Coliform	MPN/100 ml	94	100	APHA 9221 E (24 th Edition)
Turbidity	NTU	6.3	30.0	APHA 2130 B (24 th Edition)

*Limits: GSPCB Consent No. 12/2024-PCB/2524810/R00017175.
General Standards for Discharge of Environmental Pollutants into Inland Surface water, as per the
Environment (Protection) Rules, 1986.

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	29/06/2024	28/06/2025
3	COD Digester 01	28/06/2024	27/06/2025
4	COD Digester 02	28/06/2024	27/06/2025
5	BOD Incubator	28/06/2024	27/06/2025
6	Oven	28/06/2024	27/06/2025
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/EN/25/0593	Test Report Date:	05/06/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 &74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/EN/25/0593	Page No.	1 of 1
Sampling Done On	GLPL On 29/05/2025	Sample Received on	30/05/2025
Sample Collected By	GLPL	Analysis Period	30/05/2025 To 05/06/2025
Sample Description	River Down Stream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.18	6.5 – 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.2	4.0	APHA 4500 O C (24 th Edition)
Fecal Coliform	MPN/100 ml	94	100	APHA 9221 E (24 th Edition)
Turbidity	NTU	5.9	30.0	APHA 2130 B (24 th Edition)

*Limits: GSPCB Consent No. 12/2024-PCB/2524810/R00017175.

General Standards for Discharge of Environmental Pollutants into Inland Surface water, as per the Environment (Protection) Rules, 1986..

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	29/06/2024	28/06/2025
3	COD Digester 01	28/06/2024	27/06/2025
4	COD Digester 02	28/06/2024	27/06/2025
5	BOD Incubator	28/06/2024	27/06/2025
6	Oven	28/06/2024	27/06/2025
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0606	Test Report Date:	19/06/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM - GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0606	Page No.	1 of 1
Sampling Done On	GLPL On 14/06/2025	Sample Received on	15/06/2025
Sample Collected By	GLPL	Analysis Period	15/06/2025 To 19/06/2025
Sample Description	River Upstream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.20	6.5 - 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.1	4.0	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.4	30.0	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:				
Fecal Coliform	MPN/100 ml	1600	100	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	29/06/2024	28/06/2025
3	COD Digester 01	28/06/2024	27/06/2025
4	COD Digester 02	28/06/2024	27/06/2025
5	BOD Incubator	28/06/2024	27/06/2025
6	Oven	28/06/2024	27/06/2025
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0607	Test Report Date:	19/06/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 &74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0607	Page No.	1 of 1
Sampling Done On	GLPL On 14/06/2025	Sample Received on	15/06/2025
Sample Collected By	GLPL	Analysis Period	15/06/2025 To 19/06/2025
Sample Description	River Down Stream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.18	6.5 – 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.2	4.0	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.6	30.0	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:				
Fecal Coliform	MPN/100 ml	>1600	100	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	29/06/2024	28/06/2025
3	COD Digester 01	28/06/2024	27/06/2025
4	COD Digester 02	28/06/2024	27/06/2025
5	BOD Incubator	28/06/2024	27/06/2025
6	Oven	28/06/2024	27/06/2025
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0659	Test Report Date:	04/07/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0659	Page No.	1 of 1
Sampling Done On	GLPL On 28/06/2025	Sample Received on	28/06/2025
Sample Collected By	GLPL	Analysis Period	30/06/2025 To 04/07/2025
Sample Description	River Upstream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.12	6.5 – 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.2	4.0	APHA 4500 O C (24 th Edition)
Turbidity	NTU	5.9	30.0	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:				
Fecal Coliform	MPN/100 ml	920	100	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0660	Test Report Date:	04/07/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 &74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0660	Page No.	1 of 1
Sampling Done On	GLPL On 28/06/2025	Sample Received on	28/06/2025
Sample Collected By	GLPL	Analysis Period	30/06/2025 To 04/07/2025
Sample Description	River Down Stream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.13	6.5 – 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.2	4.0	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.0	30.0	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:				
Fecal Coliform	MPN/100 ml	1600	100	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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Note:

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5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01


Test Report No.	GW/VEN/25/0726	Test Report Date:	18/07/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0726	Page No.	1 of 1
Sampling Done On	GLPL On 12/07/2025	Sample Received on	12/07/2025
Sample Collected By	GLPL	Analysis Period	14/07/2025 To 18/07/2025
Sample Description	River Upstream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.24	6.5 – 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.1	4.0	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.8	30.0	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:				
Fecal Coliform	MPN/100 ml	1100	100	APHA 9221 E (24 th Edition)

End

For **GADARK LAB PVT. LTD.**


AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]


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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01


Test Report No.	GW/VEN/25/0727	Test Report Date:	18/07/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 &74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0727	Page No.	1 of 1
Sampling Done On	GLPL On 12/07/2025	Sample Received on	12/07/2025
Sample Collected By	GLPL	Analysis Period	14/07/2025 To 18/07/2025
Sample Description	River Down Stream Water Sample, 1 lit in Plastic Bottle.		


ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.20	6.5 – 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.1	4.0	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.7	30.0	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:				
Fecal Coliform	MPN/100 ml	920	100	APHA 9221 E (24 th Edition)

End

For **GADARK LAB PVT. LTD.**


AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]


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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0779	Test Report Date:	04/08/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0779	Page No.	1 of 1
Sampling Done On	GLPL On 30/07/2025	Sample Received on	31/07/2025
Sample Collected By	GLPL	Analysis Period	31/07/2025 To 04/08/2025
Sample Description	River Upstream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.27	6.5 – 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.2	4.0	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.8	30.0	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:				
Fecal Coliform	MPN/100 ml	1600	100	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0780	Test Report Date:	04/08/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM - GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0780	Page No.	1 of 1
Sampling Done On	GLPL On 30/07/2025	Sample Received on	31/07/2025
Sample Collected By	GLPL	Analysis Period	31/07/2025 To 04/08/2025
Sample Description	River Down Stream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	*Limits	Methods
pH	---	7.19	6.5 - 8.5	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	3.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.1	4.0	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.6	30.0	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:				
Fecal Coliform	MPN/100 ml	920	100	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.


AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]


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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	03/05/2025	02/08/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0821	Test Report Date:	22/08/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM - GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0821	Page No.	1 of 1
Sampling Done On	GLPL On 16/08/2025	Sample Received on	18/08/2025
Sample Collected By	GLPL	Analysis Period	18/08/2025 To 22/08/2025
Sample Description	River Upstream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Methods
pH	---	7.84	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.2	APHA 4500 O C (24 th Edition)
Turbidity	NTU	7.2	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:			
Fecal Coliform	MPN/100 ml	920	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	04/08/2025	03/11/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0822	Test Report Date:	22/08/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0822	Page No.	1 of 1
Sampling Done On	GLPL On 16/08/2025	Sample Received on	18/08/2025
Sample Collected By	GLPL	Analysis Period	18/08/2025 To 22/08/2025
Sample Description	River Down Stream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Methods
pH	---	7.64	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.4	APHA 4500 O C (24 th Edition)
Turbidity	NTU	7.0	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:			
Fecal Coliform	MPN/100 ml	350	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	04/08/2025	03/11/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0876	Test Report Date:	04/09/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM - GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0876	Page No.	1 of 1
Sampling Done On	GLPL On 29/08/2025	Sample Received on	30/08/2025
Sample Collected By	GLPL	Analysis Period	30/08/2025 To 04/09/2025
Sample Description	River Upstream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Methods
pH	---	7.34	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.2	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.4	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:			
Fecal Coliform	MPN/100 ml	1600	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	04/08/2025	03/11/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0877	Test Report Date:	04/09/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0877	Page No.	1 of 1
Sampling Done On	GLPL On 29/08/2025	Sample Received on	30/08/2025
Sample Collected By	GLPL	Analysis Period	30/08/2025 To 04/09/2025
Sample Description	River Down Stream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Methods
pH	---	7.15	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.2	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.2	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:			
Fecal Coliform	MPN/100 ml	540	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]

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Note:

1. Results relate only to the sample/s tested, only in case of samples submitted by customer & not drawn by GLPL.
2. Test report shall not be reproduced except in full, without written approval of the laboratory.
3. Samples will be preserved for a period 15 days from the delivery of Test Report.
4. Customer complaint register is available at laboratory.
5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	04/08/2025	03/11/2025



GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.
Tel. : (02362) 223519 • E-mail : info@gadark.in • Website : www.gadark.in

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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0896	Test Report Date:	20/09/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0896	Page No.	1 of 1
Sampling Done On	GLPL On 15/09/2025	Sample Received on	16/09/2025
Sample Collected By	GLPL	Analysis Period	16/09/2025 To 20/09/2025
Sample Description	River Upstream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Methods
pH	---	7.31	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.6	APHA 4500 O C (24 th Edition)
Turbidity	NTU	36.3	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:			
Fecal Coliform	MPN/100 ml	1600	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.


AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]


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4. Customer complaint register is available at laboratory.
5. Calibration details of the equipment's used in monitoring and / or analysis is back side of analysis report

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	04/08/2025	03/11/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

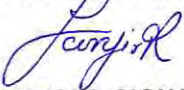
Test Report No.	GW/VEN/25/0897	Test Report Date:	20/09/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0897	Page No.	1 of 1
Sampling Done On	GLPL On 15/09/2025	Sample Received on	16/09/2025
Sample Collected By	GLPL	Analysis Period	16/09/2025 To 20/09/2025
Sample Description	River Down Stream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Methods
pH	---	7.07	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.4	APHA 4500 O C (24 th Edition)
Turbidity	NTU	27.5	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:			
Fecal Coliform	MPN/100 ml	280	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.


AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]


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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	04/08/2025	03/11/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0926	Test Report Date:	01/10/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 &74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM – GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0926	Page No.	1 of 1
Sampling Done On	GLPL On 26/09/2025	Sample Received on	27/09/2025
Sample Collected By	GLPL	Analysis Period	27/09/2025To 01/10/2025
Sample Description	River Upstream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Methods
pH	---	6.80	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.4	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.1	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:			
Fecal Coliform	MPN/100 ml	920	APHA 9221 E (24 th Edition)

End

For **GADARK LAB PVT. LTD.**

AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	04/08/2025	03/11/2025



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0927	Test Report Date:	01/10/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM - GOA.		
Letter Ref/Date	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0927	Page No.	1 of 1
Sampling Done On	GLPL On 26/09/2025	Sample Received on	27/09/2025
Sample Collected By	GLPL	Analysis Period	27/09/2025 To 01/10/2025
Sample Description	River Down Stream Water Sample, 1 lit in Plastic Bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Methods
pH	---	6.74	APHA 4500 H ⁺ B (24 th Edition)
BOD 3 days 27°C	mg/ltr	< 2.0	IS 3025 (Part 44)
Dissolved Oxygen	mg/ltr	4.6	APHA 4500 O C (24 th Edition)
Turbidity	NTU	6.0	APHA 2130 B (24 th Edition)
BACTERIOLOGICAL TEST:			
Fecal Coliform	MPN/100 ml	540	APHA 9221 E (24 th Edition)

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[SANJIV V. RAJADHYAKSHA]

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING AND ANALYSIS

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	pH Meter	Inhouse Calibration Daily	
2	Analytical Weighing Balance	10/06/2025	09/06/2026
3	COD Digester 01	10/06/2025	09/06/2026
4	COD Digester 02	10/06/2025	09/06/2026
5	BOD Incubator	10/06/2025	09/06/2026
6	Oven	10/06/2025	09/06/2026
7	UV Visible Spectrophotometer	04/08/2025	03/11/2025

Annexure XII
Calibration reports

CALIBRATION RECORD

Customer	M/S Vedanta Ltd.
Report Date	11/08/2025
Stack Name	Waste heat recovery power plant 1_Boiler 1
Sampling Time	10am to 11am
Sampling Date	07-08-2025

Instrument	Dust Monitor
Model	DR 290
Serial Num.	1306061

Optical Density from dust monitor during sampling.

Optical Density (Average)	0.045
---------------------------	-------

Sampling result in mg/m3	8.6
Avg. OD	0.045
Calculation	$8.6/0.045$
Dust Coefficient	191



Checked and confirmed by:

Swapnil Shirodkar

Horiba India Limited

Customer	M/S Vedanta Ltd.
----------	------------------

CALIBRATION RECORD

Report Date	11/08/2025
Stack Name	Waste heat recovery power plant 1_Boiler 2
Sampling Time	12:30pm to 1:30pm
Sampling Date	07-08-2025

Instrument	Dust Monitor
Model	DR 290
Serial Num.	1306065

Optical Density from dust monitor during sampling.

Optical Density (Average)	0.033
---------------------------	-------

Sampling result in mg/m3	6.7
Avg. OD	0.033
Calculation	$6.7/0.033$
Dust Coefficient	224



Checked and confirmed by:

Swapnil Shirodkar

Horiba India Limited

CALIBRATION RECORD

Customer	M/S Vedanta Ltd.
Report Date	11/08/2025
Stack Name	Waste heat recovery power plant 2_Boiler 1
Sampling Time	12:30pm to 1:30pm
Sampling Date	6-08-2025

Instrument	Dust Monitor
Model	DR 290
Serial Num.	1306068

Optical Density from dust monitor during sampling.

Optical Density (Average)	0.0720
---------------------------	--------

Sampling result in mg/m3	3.4
Avg. OD	0.0720
Calculation	$3.4/0.0720$
Dust Coefficient	47.22



Checked and confirmed by:

Swapnil Shirodkar

Horiba India Limited

CALIBRATION RECORD

Customer	M/S Vedanta Ltd.
Report Date	11/08/2025
Stack Name	Waste heat recovery power plant 2_Boiler 2
Sampling Time	3pm to 4pm
Sampling Date	06-08-2025

Instrument	Dust Monitor
Model	DR 290
Serial Num.	1306060

Optical Density from dust monitor during sampling.

Optical Density (Average)	0.029
---------------------------	-------

Sampling result in mg/m3	9.2
Avg. OD	0.029
Calculation	$9.2/0.029$
Dust Coefficient	317.24



Checked and confirmed by:

Swapnil Shirodkar

Horiba India Limited

CALIBRATION RECORD

Customer	M/S Vedanta Ltd.
Report Date	11/08/2025
Stack Name	Pig Iron division _HBS-1
Sampling Time	3:30pm to 4:30pm
Plant Load	98%
Sampling Date	08/08/2025

Instrument	Dust Monitor
Model	DR 290
Serial Num.	1306067

Optical Density from dust monitor during sampling.

Optical Density (Average)	0.013
---------------------------	-------

Sampling result in mg/m3	2.4
Avg. OD	0.013
Calculation	$2.4/0.013$
Dust Coefficient	185



Checked and confirmed by:

Swapnil Shirodkar

Horiba India Limited

CALIBRATION RECORD

Customer	M/S Vedanta Ltd.
Report Date	18/08/2025
Stack Name	Pig Iron division _BF3 HBS
Sampling Time	12pm to 1pm
Plant Load	100%
Sampling Date	12-08-2025

Instrument	Dust Monitor
Model	DR 290
Serial Num.	1306064

Optical Density from dust monitor during sampling.

Optical Density (Average)	0.011
---------------------------	-------

Sampling result in mg/m3	16.7
Avg. OD	0.011
Calculation	$16.7 / 0.011$
Dust Coefficient	1518



Checked and confirmed by:

Swapnil Shirodkar

Horiba India Limited

CALIBRATION RECORD

Customer	M/S Vedanta Ltd.
Date	18/08/2025
Stack Name	Sinter Plant _Tail End ESP
Sampling Time	3pm to 4pm
Plant Load	100%
Sampling Date	11/08/2025

Instrument	Dust Monitor
Model	DR 290
Serial Num.	1306062

Optical Density from dust monitor during sampling.

Optical Density (Average)	0.021
---------------------------	-------

Sampling result in mg/m3	26.8
Avg. OD	0.021
Calculation	26.8/0.021
Dust Coefficient	1276



Checked and confirmed by:

Swapnil Shirodkar

Horiba India Limited

Annexure XIII
Fugitive dust emission reports



GADARK LAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/05133	Test Report Date	02/06/2025
Customer Name and Address	M/s. VEDANTA LIMITED (PIG IRON PLANT) SURVEY NO. 30 (PART)41,42/1,27 (PART) AMONA, P.O. MARCELA, BICHOLIM - GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	28/05/2025	Analysis Period	29/05/2025 To 02/06/2025

SAMPLING DETAILS - FUGITIVE EMISSION MONITORING :-

Sampling Location	Internal transportation road
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	33
Average Relative Humidity [%]	56
Lateral Distance	3 mtr

ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	147.45	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	70.11	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	18.6	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	20.06	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	920	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	0.12	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

CHECKED BY

Note :

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4. Test Results relate only to the conditions prevailing at the time of sampling
5. Customer complaint register is available at laboratory.
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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/05135	Test Report Date	02/06/2025
Customer Name and Address	M/S. VEDANTA LTD. VALUE ADDED BUSINES, PIG IRON EXPANSION PLANT, SURVEY NO-61/1, 61/3, 62, 63(PART),120/1, 120/2(PART), 177(PART)205(PART), 206(PART), 207(PART), NAVELIM VILLAGE BICHOLIM GOA		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	28/05/2025	Analysis Period	29/05/2025 To 02/06/2025

SAMPLING DETAILS - FUGITIVE EMISSION MONITORING :-

Sampling Location	Loading/Unloading jetty
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	33
Average Relative Humidity [%]	56
Lateral Distance	3 mtr

ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	132.56	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	70.98	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	17.3	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	21.66	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	970	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	0.14	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/05136	Test Report Date	02/06/2025
Customer Name and Address	M/S. VEDANTA LIMITED (MET COKE DIVISION-I) (WASTE HEAT RECOVERY POWER PLANT- I) SURVEY NO. 205,206,207,31/1,33 PART OF 177,44,43/1,43/2, & 42/1, &74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM - GOA.		
Letter Ref / Date .	As per P.O. No.PO/2025/05/06288 (4920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	28/05/2025	Analysis Period	29/05/2025 To 02/06/2025

SAMPLING DETAILS - FUGITIVE EMISSION MONITORING :-

Sampling Location	MCD New Coal Shed & Coke Yard
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	33
Average Relative Humidity [%]	56
Lateral Distance	3 mtr

ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	203.22	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	107.48	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	15.7	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	18.45	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	895	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	0.09	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.

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INDUSTRIAL ANALYSTS & CONSULTANTS

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OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0940	Test Report Date	19/08/2025
Customer Name and Address	M/S. VEDANTA LIMITED (MET COKE DIVISION-I) (WASTE HEAT RECOVERY POWER PLANT- I) SURVEY NO. 205,206,207,31/1,33 PART OF 177,44,43/1,43/2, & 42/1, & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM - GOA.		
Letter Ref / Date .	As per P.O. No.PO/2025/05/06288 (4920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	12/08/2025	Analysis Period	13/08/2025 To 19/08/2025

SAMPLING DETAILS – FUGITIVE EMISSION MONITORING :-

Sampling Location	MCD New Coal Shed & Coke Yard
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	29
Average Relative Humidity [%]	81
Lateral Distance	3 mtr

ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	148.39	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	82.83	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	13.1	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	16.85	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	671	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	0.07	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0941	Test Report Date	19/08/2025
Customer Name and Address	M/s. VEDANTA LIMITED (PIG IRON PLANT) SURVEY NO. 30 (PART)41,42/1,27 (PART) AMONA, P.O. MARCELA, BICHOLIM - GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	12/08/2025	Analysis Period	13/08/2025 To 19/08/2025

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

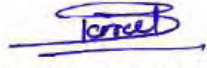
Sampling Location	Pig iron yard
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	29
Average Relative Humidity [%]	81
Lateral Distance	3 mtr

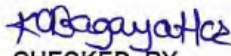
ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	80.88	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	48.65	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	16.7	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	19.2	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	634	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	0.05	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.


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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0942	Test Report Date	19/08/2025
Customer Name and Address	M/s. VEDANTA LIMITED (PIG IRON PLANT) SURVEY NO. 30 (PART)41,42/1,27 (PART) AMONA, P.O. MARCELA, BICHOLIM - GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	12/08/2025	Analysis Period	13/08/2025 To 19/08/2025

SAMPLING DETAILS - FUGITIVE EMISSION MONITORING :-

Sampling Location	Internal transportation road
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	29
Average Relative Humidity [%]	81
Lateral Distance	3 mtr

ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	105.60	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	60.38	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	15.7	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	18.05	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	647	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	0.10	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/0944	Test Report Date	19/08/2025
Customer Name and Address	M/S. VEDANTA LTD. VALUE ADDED BUSINES, PIG IRON EXPANSION PLANT, SURVEY NO-61/1, 61/3, 62, 63(PART),120/1, 120/2(PART), 177(PART)205(PART), 206(PART), 207(PART), NAVELIM VILLAGE BICHOLIM GOA		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	12/08/2025	Analysis Period	13/08/2025 To 19/08/2025

SAMPLING DETAILS - FUGITIVE EMISSION MONITORING :-

Sampling Location	Loading/Unloading jetty
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	29
Average Relative Humidity [%]	81
Lateral Distance	3 mtr

ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	98.82	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	54.39	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	14.7	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	18.45	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	721	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	0.11	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/1273	Test Report Date	13/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED (PIG IRON PLANT) SURVEY NO. 30 (PART)41,42/1,27 (PART) AMONA, P.O. MARCELA, BICHOLIM - GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	08/11/2025	Analysis Period	10/11/2025 To 13/11/2025

SAMPLING DETAILS - FUGITIVE EMISSION MONITORING :-

Sampling Location	Internal transportation road
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	30
Average Relative Humidity [%]	54
Lateral Distance	3 mtr

ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	183.37	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	82.58	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	22.55	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	23.27	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	1060	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	< 0.1	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/1274	Test Report Date	13/11/2025
Customer Name and Address	M/S. VEDANTA LIMITED (MET COKE DIVISION-I) (WASTE HEAT RECOVERY POWER PLANT- I) SURVEY NO. 205,206,207,31/1,33 PART OF 177,44,43/1,43/2, & 42/1, &74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4 & 44/5 OF AMONA VILLAGE, BICHOLIM - GOA.		
Letter Ref / Date .	As per P.O. No.PO/2025/05/06288 (4920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	08/11/2025	Analysis Period	10/11/2025 To 13/11/2025

SAMPLING DETAILS – FUGITIVE EMISSION MONITORING :-

Sampling Location	MCD New Coal Shed & Coke Yard
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	30
Average Relative Humidity [%]	54
Lateral Distance	3 mtr

ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	293.77	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	108.66	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	17.97	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	21.66	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	1010	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	< 0.1	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/1275	Test Report Date	13/11/2025
Customer Name and Address	M/S. VEDANTA LTD. VALUE ADDED BUSINES, PIG IRON EXPANSION PLANT, SURVEY NO-61/1, 61/3, 62, 63(PART),120/1, 120/2(PART), 177(PART)205(PART), 206(PART), 207(PART), NAVELIM VILLAGE BICHOLIM GOA		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	08/11/2025	Analysis Period	10/11/2025 To 13/11/2025

SAMPLING DETAILS - FUGITIVE EMISSION MONITORING :-

Sampling Location	Loading/Unloading jetty
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	30
Average Relative Humidity [%]	54
Lateral Distance	3 mtr

ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	169.43	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	94.56	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	21.24	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	24.47	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	1120	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	< 0.1	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/03

Test Report No.	GA/VEN/25/1276	Test Report Date	13/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED (PIG IRON PLANT) SURVEY NO. 30 (PART)41,42/1,27 (PART) AMONA, P.O. MARCELA, BICHOLIM - GOA.		
Letter Ref / Date .	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	08/11/2025	Analysis Period	10/11/2025 To 13/11/2025

SAMPLING DETAILS - AMBIENT AIR MONITORING :-

Sampling Location	Pig iron yard
Duration of Sampling [Hrs]	24
Average Ambient Temperature [°C]	30
Average Relative Humidity [%]	54
Lateral Distance	3 mtr

ANALYSIS REPORT :-

Parameters	Unit	Results	Limits As Per Environmental (Protection) Rules 1986	Methods
PM ₁₀	µg/m ³	119.05	< 4000	IS 5182 (Part XXIII) 2006
PM _{2.5}	µg/m ³	76.85	-	IS 5182 (Part XXIV) 2019
Sulphur Dioxide (SO ₂)	µg/m ³	22.22	<200	IS 5182 (Part II) 2001
Oxides of Nitrogen (NO ₂)	µg/m ³	24.55	<150	IS 5182 (Part VI) 2006
Carbon Monoxide (CO)	µg/m ³	1070	< 5000 (8 hrs. Average)	IS 5182 (Part X) 1999
Lead (Pb)	µg/m ³	< 0.1	<2	IS 5182 (Part XXII) 2004

End

For GADARKLAB PVT. LTD.

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Annexure XIV
Pre and Post monsoon ground water quality analysis



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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0547	Test Report Date	31/05/2025
Customer Name and Address	M/s. VEDANTA LIMITED. (PIG IRON EXPANSION PLANT). SURVEY NO. 61/1,61/(PART),120/1,120/2(PART),177(PART),205(PART), 206(PART),207(PART), VILLAGE NAVELIM, BICHOLIM - GOA.		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0547	Page No.	1 of 1
Sampling Done On	27/05/2025	Sample Received	27/05/2025
Sample Collected By	Mr. Shirishkumar Rane	Analysis Period	27/05/2025 To 31/05/2025
Sample Description	Maina - Digambar Naik Well Water, 1 lit in plastic bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Hazen unit	< 1.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.25	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.08	6.5 - 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	μS/cm	158	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	44	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	12.80	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	2.25	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	116	500.0 Max.	2000.0 Max.	APHA 2540 C
Nitrate	mg/ltr	1.05	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	28.02	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	16.04	30.0 Max.	100.0 Max.	APHA 3500 Mg B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 - B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	15	Not Specified		APHA 2540 D
Iron	mg/ltr	0.085	1.0 Max.	No Relaxation	APHA 3120 B

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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4. Customer complaint register is available at laboratory.

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GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.

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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0545	Test Report Date	31/05/2025
Customer Name and Address	M/s. VEDANTA LIMITED. (PIG IRON EXPANSION PLANT). SURVEY NO. 61/1,61/(PART),120/1,120/2(PART),177(PART),205(PART), 206(PART),207(PART), VILLAGE NAVELIM, BICHOLIM - GOA.		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0545	Page No.	1 of 1
Sampling Done On	27/05/2025	Sample Received	27/05/2025
Sample Collected By	Mr. Shirishkumar Rane	Analysis Period	27/05/2025 To 31/05/2025
Sample Description	Navelim - Sanjay Naik Well Water Sample, 1 lit in plastic bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Colour Unit	< 1.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.2	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.24	6.5 - 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	µS/cm	152	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	40	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	14.77	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	1.75	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	114	500.0 Max.	2000.0 Max.	APHA 2540 C
Nitrate	mg/ltr	1.10	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	28.02	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	12.03	Not Specified		APHA 3500 Mg B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	11	Not Specified		APHA 2540 D
Iron	mg/ltr	0.06	1.0 Max.	No Relaxation	APHA 3120 B

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0546	Test Report Date	31/05/2025
Customer Name and Address	M/S. VEDANTA LIMITED (PIG IRON PLANT) PIG IRON PLANT SURVEY NOS. 29/1, 31/1,27,39,41,44/3,42/1, 43/1,54,56/17, AMONA, BICHOLIM-GOA		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0546	Page No.	1 of 1
Sampling Done On	27/05/2025	Sample Received	27/05/2025
Sample Collected By	Mr. Shirishkumar Rane	Analysis Period	27/05/2025 To 31/05/2025
Sample Description	Amona – Sandesh Naik Well Water, 1 lit in plastic bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Hazen unit	< 1.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.22	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.26	6.5 – 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	µS/cm	148	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	48	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	15.76	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	1.25	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	102	500.0 Max.	2000.0 Max.	APHA 2540 C
Nitrate	mg/ltr	1.18	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	32.02	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	16.04	Not Specified		APHA 3111 B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 - B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	6	Not Specified		APHA 2540 D
Iron	mg/ltr	0.082	1.0 Max.	No Relaxation	APHA 3120 B

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0971	Test Report Date	01/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED. (PIG IRON EXPANSION PLANT). SURVEY NO. 61/1,61/(PART),120/1,120/2(PART),177(PART),205(PART), 206(PART),207(PART), VILLAGE NAVELIM, BICHOLIM - GOA.		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0971	Page No.	1 of 1
Sampling Done On	27/10/2025	Sample Received on	28/10/2025
Sample Collected By	Mr. Digambar Khot	Analysis Period	28/10/2025 To 01/11/2025
Sample Description	Maina - Digambar Naik Well Water, 1 lit in plastic bottle.		

ANALYSIS REPORTS:


Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Hazen unit	< 5.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.1	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.01	6.5 - 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	µS/cm	116	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	36	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	9.95	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	1.25	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	71	500.0 Max.	2000.0 Max.	APHA 2540 C
Oil & Grease	mg/ltr	< 1.0	---	---	APHA 5520 B
Nitrate	mg/ltr	< 0.01	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	28.02	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	8.02	30.0 Max.	100.0 Max.	APHA 3500 Mg B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 - B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	< 5.0	Not Specified		APHA 2540 D
Iron	mg/ltr	0.024	1.0 Max.	No Relaxation	APHA 3120 B

BACTERIOLOGICAL TEST:

E. Coli	MPN Index / 100ml	13	Not Specified		IS 1622 : 1981
Total Coliform	MPN Index / 100ml	23	Not Specified		IS 1622 : 1981

End

For GADARK LAB PVT. LTD.


AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0972	Test Report Date	01/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED. (PIG IRON EXPANSION PLANT). SURVEY NO. 61/1,61/(PART),120/1,120/2(PART),177(PART),205(PART), 206(PART),207(PART), VILLAGE NAVELIM, BICHOLIM - GOA.		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0972	Page No.	1 of 1
Sampling Done On	27/10/2025	Sample Received on	28/10/2025
Sample Collected By	Mr. Digambar Khot	Analysis Period	28/10/2025 To 01/11/2025
Sample Description	Navelim - Sanjay Naik Well Water Sample, 1 lit in plastic bottle.		

ANALYSIS REPORTS:

Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Colour Unit	< 5.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.2	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.32	6.5 - 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	µS/cm	198	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	62	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	17.90	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	11.5	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	120	500.0 Max.	2000.0 Max.	APHA 2540 C
Oil & Grease	mg/ltr	< 1.0	---	---	APHA 5520 B
Nitrate	mg/ltr	< 0.01	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	44.04	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	18.05	Not Specified		APHA 3500 Mg B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	< 5.0	Not Specified		APHA 2540 D
Iron	mg/ltr	0.034	1.0 Max.	No Relaxation	APHA 3120 B

BACTERIOLOGICAL TEST:

E. Coli	MPN Index / 100ml	280	Not Specified		IS 1622 : 1981
Total Coliform	MPN Index / 100ml	500	Not Specified		IS 1622 : 1981

End

For GADARK LAB PVT. LTD.

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TEST REPORT

Doc. No: GLPL/QF/7.8/01

Test Report No.	GW/VEN/25/0973	Test Report Date	01/11/2025
Customer Name and Address	M/S. VEDANTA LIMITED (PIG IRON PLANT) PIG IRON PLANT SURVEY NOS. 29/1, 31/1,27,39,41,44/3,42/1, 43/1,54,56/17, AMONA, BICHOLIM-GOA		
Letter Ref/Date	As per dated PO/2025/05/06288 (4920077644) date 07/05/2025.		
Lab Reference No.	GW/VEN/25/0973	Page No.	1 of 1
Sampling Done On	27/10/2025	Sample Received on	28/10/2025
Sample Collected By	Mr. Digambar Khot	Analysis Period	28/10/2025 To 01/11/2025
Sample Description	Amona – Sandesh Naik Well Water, 1 lit in plastic bottle.		

ANALYSIS REPORTS:

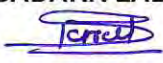
Parameters	Units	Test Result	Specification Range as per IS 10500 - 2012		Methods (APHA 24 th Edition)
			Requirement Acceptable Limit	Permissible Limit in the Absence of Alternate Source	
Colour (Pt. Scale)	Hazen unit	< 5.0	5.0 Max.	15.0 Max.	APHA 2120 B
Turbidity	NTU	0.3	1.0 Max.	5.0 Max.	APHA 2130 B
pH	---	7.21	6.5 – 8.5	No Relaxation	APHA 4500 H ⁺ B
Electrical Conductivity	µS/cm	128	Not Specified		APHA 2510 B
Total Hardness	mg/ltr	28	200.0 Max.	600.0 Max.	APHA 2340 C
Chloride	mg/ltr	11.94	250.0 Max.	1000.0 Max.	APHA 4500 Cl ⁻ B
Sulphate	mg/ltr	0.75	200.0 Max.	400.0 Max.	APHA 4500 SO ₄ ²⁻ E
Total Dissolved Solids	mg/ltr	73	500.0 Max.	2000.0 Max.	APHA 2540 C
Oil & Grease	mg/ltr	< 1.0	---	---	APHA 5520 B
Nitrate	mg/ltr	< 0.01	45.0 Max.	No Relaxation	APHA 4500 NO ₃ B
Calcium Hardness	mg/ltr	18.01	Not Specified		APHA 3500 Ca B
Magnesium Hardness	mg/ltr	10.03	Not Specified		APHA 3111 B
COD	mg/ltr	< 4.0	Not Specified		APHA 5220 - B
BOD 3 days 27°C	mg/ltr	< 2.0	Not Specified		IS 3025 (Part 44)
Phosphates	mg/ltr	< 0.1	Not Specified		APHA 4500 P D
Total Suspended Solids	mg/ltr	< 5.0	Not Specified		APHA 2540 D
Iron	mg/ltr	0.026	1.0 Max.	No Relaxation	APHA 3120 B

BACTERIOLOGICAL TEST:

E. Coli	MPN Index / 100ml	17	Not Specified	IS 1622 : 1981
Total Coliform	MPN Index / 100ml	22	Not Specified	IS 1622 : 1981

End

For GADARK LAB PVT. LTD.


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Annexure XV
Noise monitoring reports



GADARK LAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/04

Test Report No.	GA/VEN/25-05148	Test Report Date	02/06/2025
Customer Name and Address	M/s. VEDANTA LIMITED IRON AND COKE PLANTS, AMONA AND NAVELIM, BICHOLIM - GOA.		
Letter Ref / Date.	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Measurement Done By	GLPL	Page No.	1 of 1

NOISE LEVEL MEASUREMENT :

Date of Measurement	27/05/2025
---------------------	------------

Sr. No.	LOCATION	NOISE LEVEL dB (A) Leq	
		DAY TIME AVG.	NIGHT TIME AVG.
01	Near Amona Gate	61.2	49.8
02	Opp. BSNL Exchange	58.9	50.2
03	Near Dispatch Gate	58.4	49.5
04	Near Sateri Temple	55.5	46.4
05	Compound Wall Towards Navelim	61.2	48.2
06	Compound Wall Towards Maina	57.9	48.6

Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows:

Area Code	Category of Area	Limits in dB(A) Leq	
		Day Time	Night Time
(A)	Industrial Area	75	70
(B)	Commercial Area	65	55
(C)	Residential Area	55	45
(D)	Silence Zone	50	40

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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4. Customer complaint register is available at laboratory.
6. Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Sound Level Meter Sr. No. 191207632	14/05/2025	13/05/2026



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TEST REPORT

Doc.No : GLPL/QF/7.8/04

Test Report No.	GA/VEN/25/0940	Test Report Date	01/09/2025
Customer Name and Address	M/S. VEDANTA LIMITED PIG IRON PLANT. SURVEY NOS. 29/1,31/1,27,39,41 44/3,42/1,54,56/17, AMONA,BICHOLIM-GOA		
Letter Ref / Date.	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Measurement Done By	GLPL	Page No.	1 of 1

NOISE LEVEL MEASUREMENT :

Date of Measurement	29/08/2025
---------------------	------------

Sr. No.	LOCATION	NOISE LEVEL dB (A) Leq	
		DAY TIME AVG.	NIGHT TIME AVG.
01	Near Amona Gate	62.4	50.6
02	Opp. BSNL Exchange	59.6	48.7

Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows:

Area Code	Category of Area	Limits in dB(A) Leq	
		Day Time	Night Time
(A)	Industrial Area	75	70
(B)	Commercial Area	65	55
(C)	Residential Area	55	45
(D)	Silence Zone	50	40

End

For GADARK LAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/04

Test Report No.	GAVEN/25/0941	Test Report Date	01/09/2025
Customer Name and Address	M/S. VEDANTA LTD. VALUE ADDED BUSINES, PIG IRON EXPANSION PLANT, SURVEY NO-61/1, 61/3, 62, 63(PART),120/1, 120/2(PART), 177(PART)205(PART), 206(PART), 207(PART), NAVELIM VILLAGE BICHOLIM GOA		
Letter Ref / Date.	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Measurement Done By	GLPL	Page No.	1 of 1

NOISE LEVEL MEASUREMENT :

Date of Measurement	29/08/2025
---------------------	------------

Sr. No.	LOCATION	NOISE LEVEL dB (A) Leq	
		DAY TIME AVG.	NIGHT TIME AVG.
01	Near Sateri temple	54.7	48.4
02	Compound wall towards maina	58.7	48.1

Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows:

Area Code	Category of Area	Limits in dB(A) Leq	
		Day Time	Night Time
(A)	Industrial Area	75	70
(B)	Commercial Area	65	55
(C)	Residential Area	55	45
(D)	Silence Zone	50	40

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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6. Calibration details of the equipments used in monitoring and / or analysis is back side of analysis report.

CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Sound Level Meter Sr. No. 191207632	14/05/2025	13/05/2026



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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/04

Test Report No.	GA/VEN/25/0942	Test Report Date	01/09/2025
Customer Name and Address	M/S. VEDANTA LIMITED WASTE HEAT RECOVERY PLANT I & II, COKE OVEN PLANT I & II SURVEY NO. 205, 206, 207, 31/1,33, PART OF 177, 44,43/1, 43/2, 42/1 & 74, SURVEY NO. 207 (PART) OF NAVELIM VILLAGE AND SURVEY NO. 43/1, 44/4, & 44/5 OF AMONA VILLAGE, BICHOLIM - GOA.		
Letter Ref / Date.	As per P.O. No. PO/2025/05/06288 (4920077644) date 07/05/2025.		
Measurement Done By	GLPL	Page No.	1 of 1

NOISE LEVEL MEASUREMENT :

Date of Measurement	29/08/2025
---------------------	------------

Sr. No.	LOCATION	NOISE LEVEL dB (A) Leq	
		DAY TIME AVG.	NIGHT TIME AVG.
01	WHRPP1-Old (GEPL) gate.	59.0	51.3
02	Compound wall towards navelim	62.3	47.3

Noise Limits as per Schedule III of "The Environment (Protection) Rules, 1986" are as follows:

Area Code	Category of Area	Limits in dB(A) Leq	
		Day Time	Night Time
(A)	Industrial Area	75	70
(B)	Commercial Area	65	55
(C)	Residential Area	55	45
(D)	Silence Zone	50	40

End

For GADARK LAB PVT. LTD.

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CALIBRATION DETAILS OF EQUIPMENT USED FOR SAMPLING

Sr. No.	Instrument Type	Calibrated On	Calibration Due Date
1	Sound Level Meter Sr. No. 191207632	14/05/2025	13/05/2026

Annexure XVI
Solar power installation

100KW Solar power installation



Annexure XVII
SUP free awareness sessions

SUP awareness sessions given from April-September'25 at workplace and community



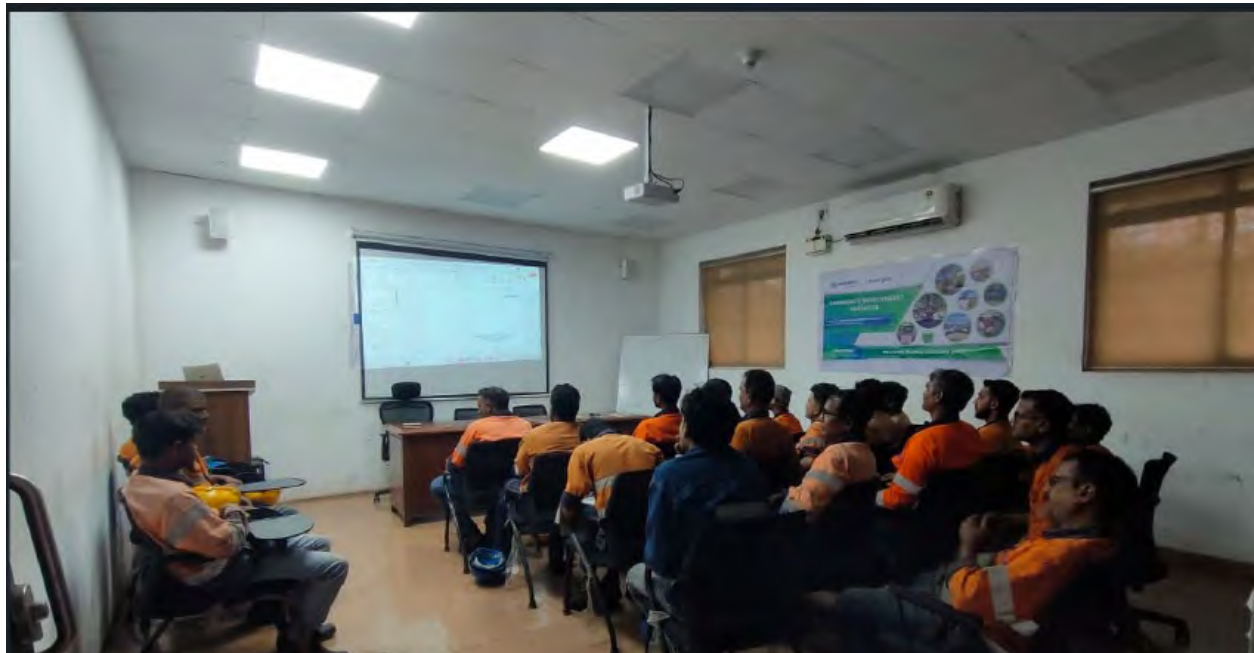
SUP awareness sessions given from April-September'25 at workplace and community



SUP awareness sessions given from April-September'25 at workplace and community



SUP awareness sessions given from April-September'25 at workplace and community



SUP awareness sessions given from April-September'25 at workplace and community



SUP awareness sessions given from April-September'25 at workplace and community

Cleanliness drive in community



SUP awareness sessions given from April-September'25 at workplace and community



Annexure XVIII
Decarbonization plan

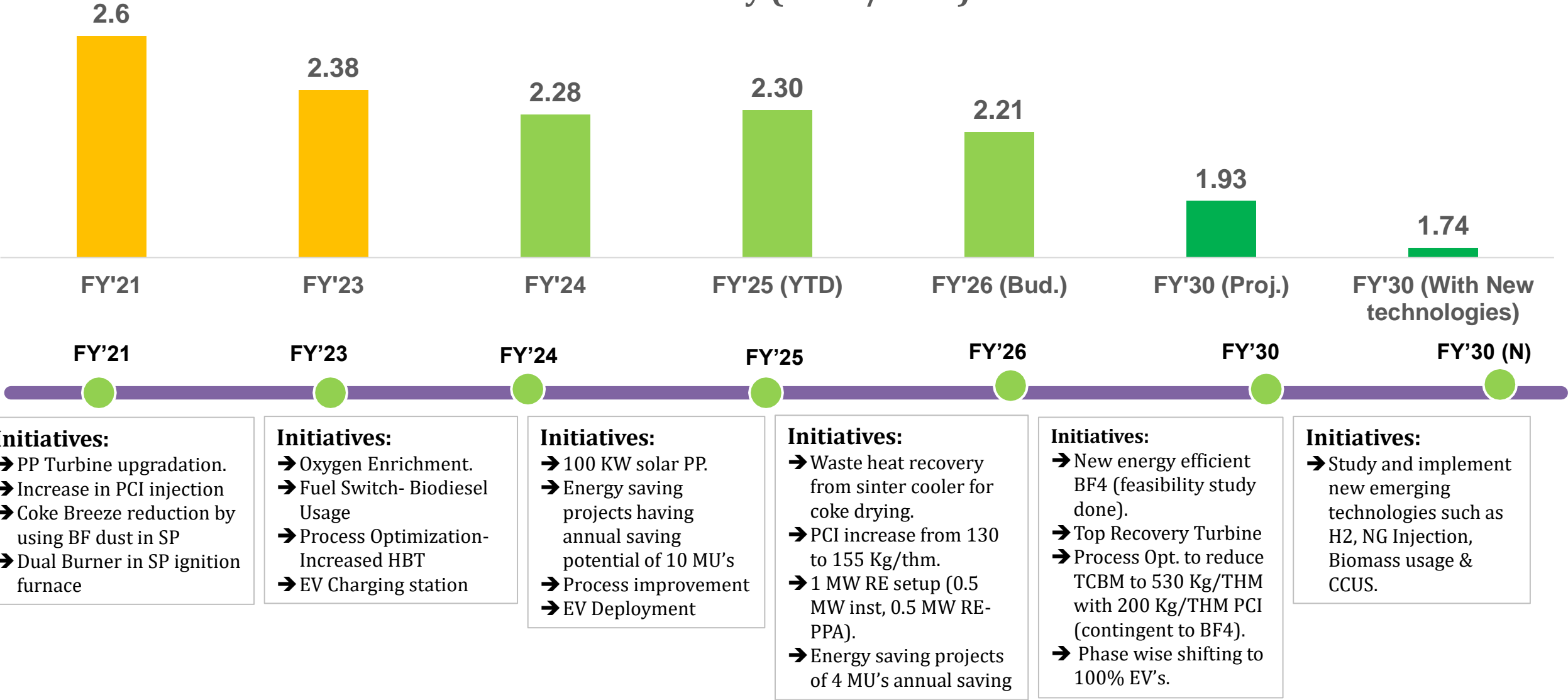


VAB GHG Roadmap



VEDANTARESOURCESLIMITED-OIL&GAS|ZINC&SILVER|POWER|ALUMINIUM|IRONORE|STEEL|COPPER

GHG Intensity (TCO2/THM)



GHG reduction plan

FY'26 Projects (Projected intensity 2.21 TCO₂/THM)

S. No.	Project Description	Impact (in TCO ₂)	Impact (in TCO ₂ /THM)
PROJECT FOR THE YEAR FY'26			
1	Waste heat recovery from sinter cooler for coke drying.	10155	0.010
2	PCI increase from 130 to 155 Kg/thm with New PCI unit.	13475	0.013
3	Reducing TCBM from 600 to 582 Kg/THM	58925	0.056
4	Energy saving projects having annual saving potential of 4 MU's	2840	0.003

FY'26-30 Projects (Projected cumulative intensity 1.93 TCO₂/THM)

S. No.	Project Description	Impact (in TCO ₂)	Impact (in TCO ₂ /THM)
PROJECTS TILL FY'30			
1	New Energy Efficient blast furnace	295876	0.148
2	Increasing PCI from 155Kg/THM to 200 Kg/THM	46200	0.023
3	Process Optimization to reduce TCBM to 530 Kg/THM with 200 Kg/THM PCI	126133	0.063
4	Waste heat recovery from Sinter pant for coke drying	31533	0.016
5	Top Recovery turbine	42600	0.021
6	Other initiatives for using Alternate fuel, EV and energy saving projects	5000	0.003
		547342	0.28

Alternate Fuels (With advancement in technology)

Figure 15 Coal consumption can be reduced significantly through the use of alternative fuels



Projected cumulative intensity 1.73 TCO2/THM

S. No.	Project Description	Impact (in TCO2)	Impact (in TCO2/THM)
1	Hydrogen Injection @ 13 Kg/THM replacing 33 Kg/THM of coke	208120	0.104
2	Natural Gas @ 74 SCM/THM replacing 55 KG/THM of coke.	82690	0.041
3	Biomass Injection @ 50 Kg/THM replacing 25 KG/THM of PCI	82167	0.041
4	CCUS installation- 40 TPD.	14825	0.007
		387801	0.19

Source: Council on Energy, Environment & Water (CEEW)

Annexure XIX
Efficiency monitoring reports

SUMMARY OF EFFICIENCY MONITORING

Sr. No	Name of stack location
1	Blast furnace 1 Bag House
2	Blast furnace 2 bag House
3	LDC Bag House
4	Blast furnace 3 Stock House Baghouse
5	Blast furnace 3 Cast House Baghouse
6	Sinter Tail ESP
7	Sinter Screening Dedusting
8	Sinter Proportioning Dedusting
9	Sinter Head End ESP
10	Sinter Flux and fuel Dedusting
11	Metcoke division ST1 Bag House
12	Metcoke division ST2 Bag House
13	Metcoke division ST3 Bag House
14	Battery 1 Bag house for coke screening plant
15	Ferrosilicon Bag filter for Submerged Arc Furnace





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TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1251	Test Report Date	08/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM – GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	04/11/2025	Analysis Period	05/11/2025 To 08/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	BF 1 Baghouse		
Date of Sample collection	04/11/2025		
Sample Details	Inlet Sample	Outlet Sample-1	Outlet Sample-1
Stack Diameter [Meter]	1.18	1.85	1.85
Height From Ground Level [Meter]	NA	30.0	30.0
Shape	Round	Round	Round
Temperature of flue gas [°C]	55	51	51
Average flue gas velocity [m/s]	10.5	10.3	10.3
Average volume of flue gas discharged [m ³ /hr]	81106	79027	79027
Average volume of flue gas discharged [Nm ³ /hr]	73687	72685	72685

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet Sample	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm ³	492.7	4.7	4.2	4.45	99.13	IS 11255 (Part I) 1985

End

For GADARKLAB PVT. LTD.

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[JAGANNATH S PARAB]

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TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1256	Test Report Date	10/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM – GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	06/11/2025	Analysis Period	07/11/2025 To 10/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	BF 2 Baghouse		
Date of Sample collection	06/11/2025		
Sample Details	Inlet Sample	Outlet Sample-1	Outlet Sample-2
Stack Diameter [Meter]	1.83	2.0	2.0
Height From Ground Level [Meter]	NA	30.0	30.0
Shape	Round	Round	Round
Temperature of flue gas [°C]	51	48	48
Average flue gas velocity [m/s]	12.1	9.7	9.8
Average volume of flue gas discharged [m ³ /hr]	114303	109888	110341
Average volume of flue gas discharged [Nm ³ /hr]	105131	102015	102435

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet Sample	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm ³	472.2	3.2	4.1	3.65	99.23	IS 11255 (Part I) 1985

End

For GADARKLAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1250	Test Report Date	08/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM - GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	04/11/2025	Analysis Period	05/11/2025 To 08/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	LDC Baghouse		
Date of Sample collection	04/11/2025		
Sample Details	Inlet	Outlet-1	Outlet-2
Stack Diameter [Meter]	1.35	1.4	1.4
Height From Ground Level [Meter]	NA	21	21
Shape	Round	Round	Round
Temperature of flue gas [°C]	54	52	52
Average flue gas velocity [m/s]	5.2	4.7	4.7
Average volume of flue gas discharged [m³/hr]	26786	26036	26036
Average volume of flue gas discharged [Nm³/hr]	24411	23873	23873

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm3	395.7	5.8	5.1	5.45	98.65	IS 11255 (Part I) 1985

End

For GADARKLAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1321	Test Report Date	17/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM - GOA.		
Letter Ref./Date	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	14/11/2025	Analysis Period	14/11/2025 To 17/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	Stock House Dedusting Stack		
Date of Sample collection	13/11/2025		
Sample Details	Inlet sample	Outlet Sample -1	Outlet Sample -2
Stack Diameter [Meter]	2.8	2.8	2.8
Height From Ground Level [Meter]	NA	30.0	30.0
Shape	Round	Round	Round
Temperature of flue gas [°C]	55	53	53
Average flue gas velocity [m/s]	7.1	7.0	7.0
Average volume of flue gas discharged [m³/hr]	156797	154303	154303
Average volume of flue gas discharged [Nm³/hr]	142456	141050	141050

ANALYSIS REPORT :

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm3	1548	12.2	12.8	12.5	99.19	IS 11255 (Part I) 1985

End

For GADARK LAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1323	Test Report Date	18/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM – GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	15/11/2025	Analysis Period	15/11/2025 To 18/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	Cast House		
Date of Sample collection	14/11/2025		
Sample Details	Inlet Sample	Outlet Sample-1	Outlet Sample-2
Stack Diameter [Meter]	2.8	2.8	2.8
Height From Ground Level [Meter]	NA	30.0	30.0
Shape	Round	Round	Round
Temperature of flue gas [°C]	52	50	50
Average flue gas velocity [m/s]	8.6	8.5	8.5
Average volume of flue gas discharged [m³/hr]	191327	188112	188112
Average volume of flue gas discharged [Nm³/hr]	175432	173552	173552

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet Sample	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm3	405.8	5.8	7.2	6.5	98.40	IS 11255 (Part I) 1985

End

For GADARK LAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1291	Test Report Date	15/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM – GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	12/11/2025	Analysis Period	12/11/2025 To 15/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	Tail End ESP		
Date of Sample collection	11/11/2025		
Sample Details	Inlet Sample	Outlet Sample-1	Outlet Sample-2
Stack Diameter [Meter]	2.7	2.7	2.7
Height From Ground Level [Meter]	NA	30	30
Shape	Round	Round	Round
Temperature of flue gas [°C]	98	89	89
Average flue gas velocity [m/s]	13.1	12.6	12.6
Average volume of flue gas discharged [m³/hr]	270361	259332	259332
Average volume of flue gas discharged [Nm³/hr]	217164	213484	213484

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet Sample	Outlet sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm3	610.7	4.5	6.0	5.25	99.14	IS 11255 (Part I) 1985

End

For GADARK LAB PVT. LTD.

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TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1293	Test Report Date	15/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM - GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	12/11/2025	Analysis Period	12/11/2025 To 15/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	Screening De-dusting		
Date of Sample collection	11/11/2025		
Sample Details	Inlet	Outlet-1	Outlet-2
Stack Diameter [Meter]	2.5	2.5	2.5
Height From Ground Level [Meter]	NA	30.0	30.0
Shape	Round	Round	Round
Temperature of flue gas [°C]	110	104	104
Average flue gas velocity [m/s]	6.4	6.2	6.2
Average volume of flue gas discharged [m ³ /hr]	113289	109754	109754
Average volume of flue gas discharged [Nm ³ /hr]	88146	86755	86755

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet Sample	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm ³	388.0	6.0	6.5	6.25	98.39	IS 11255 (Part I) 1985

End

For GADARKLAB PVT. LTD.

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GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.
Tel. : (02362) 223519 • E-mail : info@gadark.in • Website : www.gadark.in

OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/EN/25/1297	Test Report Date	17/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM - GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	13/11/2025	Analysis Period	13/11/2025 To 17/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	Proportioning De-dusting		
Date of Sample collection	12/11/2025		
Sample Details	Inlet Sample	Outlet Sample-1	Outlet Sample-2
Stack Diameter [Meter]	2.5	2.5	2.5
Height From Ground Level [Meter]	NA	30	30
Shape	Round	Round	Round
Temperature of flue gas [°C]	63	56	56
Average flue gas velocity [m/s]	9.9	9.7	9.7
Average volume of flue gas discharged [m³/hr]	175633	171082	171082
Average volume of flue gas discharged [Nm³/hr]	155770	154962	154962

ANALYSIS REPORT:

Parameters	Unit	Results			Outlet (Average)	Operating Efficiency %	Methods
		Inlet Sample	Outlet Sample-1	Outlet Sample-2			
TPM / SPM	mg/Nm³	1127.4	15.8	18.8	17.3	98.48	IS 11255 (Part I) 1985

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

CHECKED BY

Note :

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2. Test certificate shall not be reproduced except in full, without written approval of the laboratory.
3. Samples will be preserved for a period 15 days from the delivery of Test Certificate.
4. Test Results relate only to the conditions prevailing at the time of sampling
5. Customer complaint register is available at laboratory.



GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.
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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1317	Test Report Date	17/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM - GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	14/11/2025	Analysis Period	14/11/2025 To 17/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	Head End ESP		
Date of Sample collection	13/11/2025		
Sample Details	Inlet sample	Outlet Sample -1	Outlet Sample -2
Stack Diameter [Meter]	3.2	6.8	6.8
Height From Ground Level [Meter]	NA	100	100
Shape	Round	Round	Round
Temperature of flue gas [°C]	177	149	149
Average flue gas velocity [m/s]	23.5	4.8	4.7
Average volume of flue gas discharged [m³/hr]	680192	630251	615868
Average volume of flue gas discharged [Nm³/hr]	450438	445059	434902

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet Sample	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm3	1636.9	14.2	21.8	21.5	99.12	IS 11255 (Part I) 1985

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

CHECKED BY

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GADARK LAB PVT. LTD.

INDUSTRIAL ANALYSTS & CONSULTANTS

LAB.: H-54, Additional M.I.D.C. Kudal, Taluka - Kudal, District - Sindhudurg - 416 525.

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OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.

Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1319	Test Report Date	17/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM – GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	14/11/2025	Analysis Period	14/11/2025 To 17/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	Flux & Fuel De - dusting		
Date of Sample collection	13/11/2025		
Sample Details	Inlet sample	Outlet Sample -1	Outlet Sample -2
Stack Diameter [Meter]	1.62	1.62	1.62
Height From Ground Level [Meter]	NA	30.0	30.0
Shape	Round	Round	Round
Temperature of flue gas [°C]	57	55	55
Average flue gas velocity [m/s]	7.1	7.0	7.0
Average volume of flue gas discharged [m ³ /hr]	52802	52134	52134
Average volume of flue gas discharged [Nm ³ /hr]	47682	47366	47366

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm ³	692.8	11.9	12.5	12.20	98.24	IS 11255 (Part I) 1985

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S PARAB]

CHECKED BY

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TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1253	Test Report Date	08/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM – GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	06/11/2025	Analysis Period	06/11/2025 To 08/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	Battery 2 St 01		
Date of Sample collection	06/11/2025		
Sample Details	Inlet	Outlet Sample-1	Outlet Sample-2
Stack Diameter [Meter]	0.9	0.8	0.8
Height From Ground Level [Meter]	NA	16.5	16.5
Shape	Round	Round	Round
Temperature of flue gas [°C]	48	45	45
Average flue gas velocity [m/s]	10.3	12.6	12.6
Average volume of flue gas discharged [m³/hr]	23756	22858	22885
Average volume of flue gas discharged [Nm³/hr]	22054	21420	21446

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm3	282.5	4.5	5.5	5.0	98.20	IS 11255 (Part I) 1985

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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Tel. : (02362) 223519 • E-mail : info@gadark.in • Website : www.gadark.in

OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1254	Test Report Date	08/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM – GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	06/11/2025	Analysis Period	06/11/2025 To 08/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	Battery 2 St 02		
Date of Sample collection	06/11/2025		
Sample Details	Inlet	Outlet Sample-1	Outlet Sample-2
Stack Diameter [Meter]	1.02	1.1	1.1
Height From Ground Level [Meter]	NA	16.5	16.5
Shape	Round	Round	Round
Temperature of flue gas [°C]	44	42	42
Average flue gas velocity [m/s]	12.7	10.6	10.5
Average volume of flue gas discharged [m ³ /hr]	37496	36201	36090
Average volume of flue gas discharged [Nm ³ /hr]	35249	34247	34142

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm ³	314.6	4.2	4.5	4.35	98.66	IS 11255 (Part I) 1985

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
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TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1255	Test Report Date	08/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM – GOA.		
Letter Ref.	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	06/11/2025	Analysis Period	06/11/2025 To 08/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)


Stack Attached to	Battery 2 St 03		
Date of Sample collection	06/11/2025		
Sample Details	Inlet	Outlet Sample-1	Outlet Sample-2
Stack Diameter [Meter]	0.78	0.8	0.8
Height From Ground Level [Meter]	NA	16.5	16.5
Shape	Round	Round	Round
Temperature of flue gas [°C]	42	40	40
Average flue gas velocity [m/s]	12.7	12.6	12.6
Average volume of flue gas discharged [m ³ /hr]	22993	22722	22722
Average volume of flue gas discharged [Nm ³ /hr]	21752	21633	21633

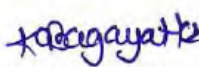
ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM / SPM	mg/Nm ³	654.2	7.0	6.5	6.75	98.97	IS 11255 (Part I) 1985

End

For GADARK LAB PVT. LTD.


AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]


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Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1252	Test Report Date	10/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM - GOA.		
Letter Ref./Date	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025		
Sampling Done By	GLPL	Page No.	1 of 1
Sample Received on	05/11/2025	Analysis Period	06/11/2025 To 10/11/2025

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	CSP 1		
Date of Sample collection	05/11/2025		
Sample Details	Inlet	Outlet Sample- 1	Outlet Sample- 2
Stack Diameter [Meter]	1.25	1.25	
Height From Ground Level [Meter]	16.5	16.5	16.5
Shape	Round	Round	Round
Temperature of flue gas [°C]	51	49	49
Average flue gas velocity [m/s]	12.9	12.7	12.7
Average volume of flue gas discharged [m³/hr]	56932	56225	56225
Average volume of flue gas discharged [Nm³/hr]	52363	52034	52034

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet	Outlet Sample- 1	Outlet Sample- 2	Average (Outlet)		
TPM / SPM	mg/Nm³	311.8	4.6	4.2	4.4	98.58	IS 11255 (Part I) 1985

End

For GADARK LAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

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OFF.: 15, Hindustan Kohinoor Industrial Complex, L.B.S. Marg, Vikhroli (West), Mumbai - 83.
Tel.: (022) 2577 7069 / 2577 7070 / 2085 0091 • +91 93213 12367

TEST REPORT

Doc.No : GLPL/QF/7.8/02

Test Report No.	GA/VEN/25/1295		Test Report Date	15/11/2025
Customer Name and Address	M/s. VEDANTA LIMITED, VALUE ADDED BUSINESS AMONA, NAVELIM, BICHOLIM - GOA.			
Letter Ref./Date	As per P.O. No. PO/2025/11/07103 (4920080715) 01/11/2025			
Sampling Done By	GLPL	Page No.	1 of 1	
Sample Received on	13/11/2025	Analysis Period	13/11/2025 To 15/11/2025	

SAMPLING DETAILS - STACK EMISSION (EFFICIENCY)

Stack Attached to	Fesi Baghouse		
Date of Sample collection	12/11/2025		
Sample Details	Inlet Sample	Outlet Sample-1	Outlet Sample-2
Stack Diameter [Meter]	1.80	1.80	1.80
Height From Ground Level [Meter]	NA	30.0	30.0
Shape	Round	Round	Round
Temperature of flue gas [°C]	264	115	115
Average flue gas velocity [m/s]	18.2	13.0	13.0
Average volume of flue gas discharged [m³/hr]	166292	119244	119244
Average volume of flue gas discharged [Nm³/hr]	92281	91585	91585

ANALYSIS REPORT:

Parameters	Unit	Results				Operating Efficiency %	Methods
		Inlet Sample	Outlet Sample-1	Outlet Sample-2	Average (Outlet)		
TPM/SPM	mg/Nm3	542.5	4.8	5.7	5.25	99.03	IS 11255 (Part I) 1985

End

For GADARKLAB PVT. LTD.

AUTHORISED SIGNATORY
[JAGANNATH S. PARAB]

CHECKED BY

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Annexure XX
EC advertisement in newspapers

[illegible]

Annexure XXI
EC Copies submitted to local bodies



sesa goa iron ore

Ref No. VAB/ENV/2024-25/39

28/10/2024

To,
North Goa Zilla Panchayat
Junta House, 3rd Lift, 5th Floor
Panaji, Tiswadi, Goa-403001

Subject: Submission of Environment Clearance copy

Sir,

We would like to inform your good office that we have received Environment Clearance for our expansion project for Value added Business at Vedanta Ltd. Amona – Navelim Goa vide EC Identification No EC24A1001GA5281560N dated 18/10/2024. We are submitting herewith the copy of Environmental Clearance for your reference.

Thanking you,

Yours faithfully,

For Vedanta Limited – Value Added Business

Saptesh Sardesai

CEO-Value Added Business
Vedanta Ltd. Amona, Goa

VEDANTA LIMITED

Sesa Goa iron ore: Sesa Ghor, 20 FDC Complex, Patto, Panjim, Goa – 403 001, India
T: +91 (832) 3402600 | Website: www.sesagoaironore.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 101, Corporate Avenue, And Projects, Chakola, Andheri (East), Mumbai 400093, Maharashtra, India.
CIN: L13200MH1985PLC291934

sesa@vedanta.com



sesa goa iron ore

Ref No. VAB/ENV/2024-25/40

28/10/2024

To,
District Magistrate
Collectorate North,
Panaji, Goa-403001

Subject: Submission of Environment Clearance copy

Sir,

We would like to inform your good office that we have received environment clearance for our expansion project for Value added Business at Vedanta Ltd. Amona – Navelim Goa vide EC Identification No EC24A1001GA5281560N dated 18/10/2024. We are submitting herewith the copy of Environmental Clearance for your reference.

Thanking you,

Yours faithfully,

For Vedanta Limited – Value Added Business


Saptesh Sardesai

CEO-Value Added Business
Vedanta Ltd. Amona, Goa



VEDANTA LIMITED

Sesa Goa Iron Ore, Sesa Ghar, 20 EDC Complex, Patto, Panaji, Goa – 403101, India
T: +91 (0)832 3496400 | Website: www.sesagoaironore.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, Ahal Project, Chakale, Andheri (East), Mumbai-400052, Maharashtra, India.
CIN: L3205MH1965PLC290304

Ses10010101001001



sesa goa iron ore

Ref No. VAB/ENV/2024-25/41

28/10/2024

To,
Directorate of Industries trade and commerce
Udyog Bhavan,
Panaji, Goa- 403001

Subject: Submission of Environment Clearance copy

Sir,


We would like to inform your good office that we have received environment clearance for our expansion project for Value added Business at Vedanta Ltd. Amona – Navelim Goa vide EC Identification No EC24A1001GA5281560N dated 18/10/2024. We are submitting herewith the copy of Environmental Clearance for your reference.

Thanking you,

Yours faithfully,

For Vedanta Limited – Value Added Business


Saptesh Sardesai

 CEO-Value Added Business
Vedanta Ltd. Amona, Goa

VEDANTA LIMITED

Sesa Goa Iron Ore: Sesa Ghāt, 20 EDC Complex, Patto, Panaji, Goa – 403 001, India
T: +91 0832 2460600 | Website: www.sesagoaironore.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, And Projects, Chokala, Andheri (East), Mumbai 400093, Maharashtra, India
CIN: L13209MH0659PLC291394

Sensitivity: Secret (S)



sesa goa iron ore

Ref No. VAB/ENV/2024-25/42

28/10/2024

To,
Deputy Collector & SDO
Udyog Bhavan,
Panaji, Goa- 403001

Subject: Submission of Environment Clearance copy


Sir,


We would like to inform your good office that we have received environment clearance for our expansion project for Value added Business at Vedanta Ltd. Amona – Navelim Goa vide EC Identification No EC24A1001GA5281560N dated 18/10/2024. We are submitting herewith the copy of Environmental Clearance for your reference.

Thanking you,

Yours faithfully,

For Vedanta Limited – Value Added Business


Saptesh Sardesai


CEO-Value Added Business
Vedanta Ltd. Amona, Goa

VEDANTA LIMITED

Sesa Goa Iron ore, Sesa Ghaz, 20 EDC Complex, Patto, Panaji, Goa – 403 001, India
T : +91 0832 2450600 | Website: www.sesagoaironore.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, Andheri (East), Mumbai 400093, Maharashtra, India
CIN: U13209MH1965PLC291394

VEDANTA LIMITED



28/10/2024

Subject: Submission of Environment Clearance copy

We would like to inform your good office that we have received environment clearance for our expansion project for Value added Business at Vedanta Ltd. Amona – Navelim Goa vide EC Identification No EC24A1001GA5281560N dated 18/10/2024. We are submitting herewith the copy of Environmental Clearance for your reference.

Yours faithfully,

Saptesh Sardesai

VEDANTA LIMITED
Sesa Gita Inn one, Sesa Ghos, 20 EDM Complex, Patto, Panaji, Goa - 403 001, India
T: +91 0812 2460600 / Website: www.sesagita.inn.net

Registered Office: Victoria Harbour, 1st Floor, C Wing, 112-113, Corporate Avenue, AIOF Building, Causeway, Kowloon (HKG), 9990999 922423, 999099999, 999999999
 CIN: L133094601965PLC761504

periodic intervals



sesa goa iron ore

Ref No. VAB/ENV/2024-25/44

28/10/2024

To,
Sankhali Municipal Council
Dessai Nagar,
Sankhali, Goa- 403505

Subject: Submission of Environment Clearance copy

Sir,

We would like to inform your good office that we have received environment clearance for our expansion project for Value added Business at Vedanta Ltd. Amona – Navelim Goa vide EC Identification No EC24A1001GA5281560N dated 18/10/2024. We are submitting herewith the copy of Environmental Clearance for your reference.

Thanking you,

Yours faithfully,

For Vedanta Limited – Value Added Business

Saptesh Sardesai

CEO Value Added Business
Vedanta Ltd, Amona, Goa

VEDANTA LIMITED

Sesa Goa iron ore: Sesa Gate, 20 EDC Complex, Patto, Panaji, Goa - 403 001, India
T +91 0832 2400600 Website: www.sesagoaironore.com

Registered Office: Vedanta Limited, 1st Floor, "C" wing, Unit B05, Corporate Avenue, Akul Project, Chakala, Andheri (East), Mumbai 400093, Maharashtra, India.
CIN: L13209MH1985PLC291394

Digitally signed by Saptesh Sardesai



sesa goa iron ore

Ref No. VAR/ENV/2024-25/45

28/10/2024

To,
Amona Panchayat,
Bicholim-Goa 403107

Subject: Submission of Environment Clearance copy


Sir,


We would like to inform your good office that we have received environment clearance for our expansion project for Value added Business at Vedanta Ltd. Amona – Navelim Goa vide EC Identification No EC24A1001GA5281560N dated 18/10/2024. We are submitting herewith the copy of Environmental Clearance for your reference.

Thanking you,

Yours faithfully,

For Vedanta Limited – Value Added Business


Saptesh Sardesai

 CEO-Value Added Business
Vedanta Ltd. Amona, Goa

VEDANTA LIMITED

Sesa Goa iron ore Sesa (Jhor, 20 EDC Complex, Patto, Panjim, Goa – 403 001), India
T: +91 (0)32 2466600 | Website: www.sesagoaironore.com

Registered Office: Vedanta Limited, 1st Floor, "C" wing, Unit 103, Corporate Avenue, Andri Project, Chakala, Andheri (East), Mumbai 400093, Maharashtra, India
CIN: L13209MH1965PLC191344

Sensitive Information



sesa goa iron ore

Ref No. VAB/ENV/2024-25/46

28/10/2024

To,
Navelim Panchayat
Bicholim-Goa 403107

Subject: Submission of Environment Clearance copy

Sir,

We would like to inform your good office that we have received environment clearance for our expansion project for Value added Business at Vedanta Ltd. Amona – Navelim Goa vide EC Identification No EC24A1001GA5281560N dated 18/10/2024. We are submitting herewith the copy of Environmental Clearance for your reference.

Thanking you,
Yours faithfully,
For Vedanta Limited – Value Added Business


Saptesh Sardesai
CEO-Value Added Business
Vedanta Ltd. Amona, Goa

VEDANTA LIMITED

Sesa Goa Iron Ore: Sesa Gilse, 20 EDC Complex, Porto, Panaji, Goa - 403 001, India
T: +91 0832 2450600 Website: www.sesagoa.vedanta.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, And Projects, C-Indiab, Andheri (East), Mumbai-400093, Maharashtra, India.
CIN: L13209MH1965PLC291994

VEDANTA LIMITED



sesa goa iron ore

Ref No. VAB/ENV/2024-25/47

28/10/2024

To,
Chief Inspector of Factories and Boilers
Government of Goa
Inspectorate of Factories and Boilers
Altinho, Panaji, Goa

Subject: Submission of Environment Clearance copy

Sir,

We would like to inform your good office that we have received environment clearance for our expansion project for Value added Business at Vedanta Ltd. Amona – Navelim Goa vide EC Identification No EC24A1001GA5281560N dated 18/10/2024. We are submitting herewith the copy of Environmental Clearance for your reference.

Thanking you,
Yours faithfully,
For Vedanta Limited – Value Added Business

Saptesh Sardesai
CEO-Value Added Business
Vedanta Ltd. Amona, Goa

VEDANTA LIMITED

Sesa Goa iron ore: Sesa Glair, 20 EDC Complex, Patto, Panaji, Goa – 403 001, India.
T: +91 0832 2460600 | Website: www.sesagoaironore.com

Registered Office: Vedanta Limited, 1st Floor, 'C' wing, Unit 103, Corporate Avenue, And Projects, Chakala, Andheri (East), Mumbai 400093, Maharashtra, India.
CIN: L15208MH1963PLC291494

Sensitivity: Internal (C2)

Annexure XXII
Digital display board

Digital Display Board

