



Mangalore SEZ Limited

Sy. No 168/3A, Plot No U-
Administrative Building
Mangalore Special Economic Zone
Bajpe Village, Mangalore taluk
Dakshina Kannada (Dist)
Karnataka-574142
29 Dec 2021

MSEZL/MNG/EC/COMP/2020-21

To,

The Director,
Southern Region, Regional Office,
Ministry of Environment and Forests,
Kendriya Sadan, 4th Floor, E&F Wings,
17th Main Road, 1st Block, Koramangala,
Bangalore - 560 034

RECEIVED
Regional Office
Karnataka State Pollution Control Board
Plot No.10-'B', Baikampady Industrial Area
Mangaluru-575011

Sir,

Sub: Six monthly Compliance Report.

Ref:

1. Environmental Clearance No: 21-383/2007-IA-III, dated 3rd April 2008.
2. Amendment to Environmental Clearance for setting up of Phase-I of Special Economic Zone at Mangalore by M/s Mangalore SEZ Ltd - regarding No: 21-383/2007-IA-III dated 13th July 2012.
3. Amendment to Environmental Clearance for setting up of Phase-I of Special Economic Zone at Mangalore by M/s Mangalore SEZ Ltd date 27 Aug 2014.
4. Amendment to Environmental Clearance for development of Multi Product Units at Mangalore SEZ dated 18 June 2015.

With reference to above, we would like to submit the compliance report as on date.

S. No.	A. SPECIFIC CONDITIONS	COMPLIANCE
(i)	No Objection Certificate from the Karnataka State Pollution Control Board shall be obtained before initiating the project.	Consent For Establishment from KSPCB obtained on 30 April 2008 and Extension of validity of Consent for Establishment obtained on 27 May 2013 and the copy was submitted to MoEF.
(ii)	The MSEZ project shall be restricted to the Phase-I of the project, proposed over 1,800 acres. The	Complied. MSEZL will approach MoEF with requisite documents as



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S. No.	A. SPECIFIC CONDITIONS	COMPLIANCE
	phase II of the project shall be considered by Ministry of Environment and Forests only after receipt of all requisite documents/information as laid down in the Environmental Impact Assessment Notification, 2006 and Coastal Regulation Zone Notification, 1991 as applicable.	per EIA Notification, 2006 for Phase-2 expansions if taken in future.
(iii)	All development in the Coastal Regulation Zone area shall be in accordance with the Coastal Regulation Zone Notification, 1991. No destruction of mangroves shall be undertaken except while undertaking the permissible activities in the Coastal Regulation Zone-I areas.	Complied.
(iv)	The project proponent shall not take up any activity in 875 acres of Coastal Regulation Zone land, other than those permissible under the Coastal Regulation Zone Notification 1991 such as pipeline corridors, pipelines roads on stilts.	Noted and complied.
(v)	With regard to the containing the suspected contamination of the groundwater near Athurkodi area of Kuthethoor village, MRPL have given an undertaking vide their letter dated 19.3.2008 which is as follows: - a) Implementation of recommendation of NGPRI will be started by MRPL immediately after submission of their report. b) Depending upon the nature of their recommendations, we will make efforts to complete necessary actions within 6 months from the date of receipt of their report. c) In addition to above, a daily vigil is already in place to take samples from different places and to monitor any suspected oil leakage. This will continue till the problem is resolved. d) We are also in continuous contact with the residents in the surround areas with	This condition pertains to MRPL phase III expansion project. MRPL phase III expansion has been detached from MSEZ phase I project vide EC amendment dated 13 th July 2012. MRPL shall be complying conditions relevant to them as part of their existing clearance.



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S. No.	A. SPECIFIC CONDITIONS	COMPLIANCE
	regard to any contamination. KSPCB and MRPL shall ensure that (a) to (d) above is implemented in a time bound manner and a monthly report on the progress of the activities provided to the Regional Office of this Ministry at Bangalore. For this purpose a separate budget would be allocated by MRPL.	
(vi)	The project proponent shall obtain a report from the Wildlife Department with regard to existence of wildlife in the proposed site as claimed by the public before implementing the project.	Report from the chief conservator of Forest regarding existence of wildlife in the proposed site was submitted to the MoEF dated June 5, 2008.
(vii)	The R&R package shall be strictly in accordance with the laid down norms of the State Government.	The R&R Package is being implemented strictly as per approved policy by State Government. In 1 st PDF 1246 families out of 1253, In 2 nd PDF 214 families out of 214, In 3 rd PDF 146 families out of 147 families & 14 shops has been compensated with R&R Packages. Totally 1620 families have vacated their houses from the project area and are rehabilitated in R&R Colony.
(viii)	A marine Environment Impact Assessment and Risk Assessment along with the Disaster Management Plan shall be prepared for the outfall facilities proposed in the Coastal Regulation Zone and the marine areas.	NIO has carried out EIA, Risk Assessment, DMP and Bathymetry survey along with Marine Outfall pipeline alignment. The detailed design report of the Marine Outfall facility is prepared by Master planning consultants of MSEZ under the guidance of Department of Oceanography, IIT Chennai. The design report was also vetted by NIO, Goa. The detailed project report of the facility is submitted to MoEF during November 2009. MSEZ has taken up the implementation of the above facility and



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S. No.	A. SPECIFIC CONDITIONS	COMPLIANCE
		completed the work by July 2014. MSEZ obtained consent for operation of treated wastewater discharge line from KSPCB vide dated 9 Sep 2014, 8 Oct 2015 & 27 Aug 2016.
(ix)	Project proponent shall put up a dedicated website and a display panel to inform the public regarding the Ambient Air Quality along with SO ₂ NO _x and other parameters as prescribed as Central Pollution Control Board (CPCB).	MSEZL has dedicated website 'www.msezl.com', wherein Environment Monitoring Parameters are periodically uploaded and made available to the public. Installation and commissioning of Continuous Ambient Air Quality Monitoring station (CAAQMS) has been completed during the month July 2017 and presently data is being transferred to CPCB server continuously. The location of monitoring station is finalized in consultation with KSPCB.
(x)	The gaseous emissions (SO ₂ , NO _x , HC, VOC and Benzene) from various process units shall conform to the standards prescribed by the concerned State Pollution Control Board. All the measures detailed in the EMP and response to the Public Hearing shall be taken to control the point/stack and fugitive gaseous emissions from the proposed facilities, processes and storage units etc., for ensuring that the ambient air quality around the Refinery due to the expansion is maintained at the predicted 24 hourly average maximum concentration.	Noted. The existing units in MSEZ are complying the conditions as per their approvals and submitting reports to KSPCB directly. MRPL phase III expansion has been detached from MSEZ phase I project vide EC amendment dated 13 th July 2012. MRPL shall be complying conditions relevant to them as part of their existing clearance.
(xi)	The emission levels of the other pollutants shall also remain within the permissible levels	Noted. The existing units in MSEZ are complying the conditions as per their approvals and submitting reports to KSPCB directly. MRPL phase III expansion has been detached from MSEZ phase I



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S. No.	A. SPECIFIC CONDITIONS	COMPLIANCE
		project vide EC amendment dated 13 th July 2012. MRPL shall be complying conditions relevant to them as part of their existing clearance.
(xii)	The industrial units in the SEZ and the associated facilities shall be strictly in accordance with the norms laid down by the Karnataka State Government and CPCB.	Noted and will be adhered.
(xiii)	The project proponent shall ensure that the greenery of the area is maintained. Further, 33% of the project area shall be dedicated for green belt development of which at least 5% shall be for mangrove afforestation. The local Forest Department shall be associated for this purpose and requisite budget earmarked.	Presently MSEZL has completed Green Belt development in 272 acres out of 272 acres by planting 122400 saplings. Green Belt operation & maintenance is for 2-3 years & plants are maintained as per the good practises to ensure 100% survival. Slope stabilisation in about 18 acres with vetiver grass has been completed.
(xiv)	The project proponent shall ensure that the water requirement of the Mangalore city does not get affected due to the SEZ operation. Adequate provision shall be made in the reservoirs to provide for the water requirement of the cities.	Noted.
(xv)	The project proponent shall ensure that during construction and operation of the project the traffic in the city is not affected.	Complied.
(xvi)	All precautions of the highest standards shall be incorporated in the design of the project to ensure that there is no chance of emission/leakage of hazardous chemicals including Benzene. Detailed monitoring programme shall be designed and the information provided to the public through display and dedicated website by means of online monitoring.	Noted. The existing units in MSEZ are complying the conditions as per their approvals and submitting reports to KSPCB directly. MRPL phase III expansion has been detached from MSEZ phase I project vide EC amendment dated 13 th July 2012. MRPL shall be complying conditions relevant to them as part of their existing

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S. No.	A. SPECIFIC CONDITIONS	COMPLIANCE
		clearance.
(xvii)	Low Sulphur internal fuel oil and fuel gas shall be fired in process heaters and boilers.	Noted. The existing units in MSEZ are complying the conditions as per their approvals and submitting reports to KSPCB directly. MRPL phase III expansion has been detached from MSEZ phase I project vide EC amendment dated 13 th July 2012. MRPL shall be complying conditions relevant to them as part of their existing clearance.
(xviii)	Quarterly monitoring of fugitive emissions shall be carried out by Fugitive Emission Detectors (GMI Leak Surveyor). Guidelines of CPCB will be followed for monitoring fugitive emissions. For control of fugitive emissions, all unsaturated hydrocarbons shall be routed to the flare system. The flare system shall be designed for smokeless burning. Flare Gas Recovery System shall be installed for reduction of Hydrocarbon loss and emission of VOCs, NOx, N ₂ O, SOx & CO ₂ to the environment.	Noted. The existing units in MSEZ are complying the conditions as per their approvals and submitting reports to KSPCB directly. MRPL phase III expansion has been detached from MSEZ phase I project vide EC amendment dated 13 th July 2012. MRPL shall be complying conditions relevant to them as part of their existing clearance.
(xix)	Regular Ambient Air Quality Monitoring shall be carried out. The location and results of existing monitoring stations shall be reviewed in consultation with the concerned State Pollution Control Board based on the occurrence of maximum ground level concentration and downwind direction of wind. Additional Stations shall be set up, if required. It shall be ensured that at least one monitoring station is set up in up-wind & in down-wind direction along with those in other directions.	Ambient Air Quality Monitoring is being carried out regularly in three locations and the locations of monitoring are selected in consultation with KSPCB. The reports of monitored data attached as Annexure-I .
(xx)	On-line data for air emissions shall be transferred to the CPCB and SPCB regularly. The instruments	Installation and commissioning of Continuous Ambient Air Quality



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S. No.	A. SPECIFIC CONDITIONS	COMPLIANCE
	used for ambient air quality monitoring shall be calibrated regularly. The monitoring protocol shall ensure continuous monitoring of all the parameters.	Monitoring station (CAAQMS) has been completed during the month July 2017 and presently data is being transferred to CPCB server continuously. The location of monitoring station is finalized in consultation with KSPCB.
(xxi)	The practice of acoustic plant design shall be adopted to limit noise exposure for personnel to an 8 hr time weighted average of 90 dB (A).	Noted. The existing units in MSEZ are complying the conditions as per their approvals and submitting reports to KSPCB directly.
(xxii)	All the pumps and other equipment's, where there is a likelihood of HC leakages, shall be provided with appropriate indicators and detectors. Provision for immediate isolation of such equipment, in case of a leakage shall also be made. The company shall adopt Leak Detection And Repair (LDAR) programme for quantification and control of fugitive emissions.	Noted. The existing units in MSEZ are complying the conditions as per their approvals and submitting reports to KSPCB directly. MRPL phase III expansion has been detached from MSEZ phase I project vide EC amendment dated 13 th July 2012. MRPL shall be complying conditions relevant to them as part of their existing clearance.
(xxiii)	The product loading gantry shall be connected to the product sphere in closed circuit through the vapour arm connected to the tanker. Data on fugitive emissions shall be regularly monitored and records shall be maintained	Noted. The existing units in MSEZ are complying the conditions as per their approvals and submitting reports to KSPCB directly.
(xxiv)	The company shall ensure that no halogenated organic is sent to the flares. If any of the halogenated organic are present, then the respective streams may be incinerated, if there are no technically feasible or economically viable reduction/recovery options. Any stream containing organic carbon, other than halogenated shall be connected to proper flaring system, if not to a recovery device or an incinerator.	Noted. The existing units in MSEZ are complying the conditions as per their approvals and submitting reports to KSPCB directly. MRPL phase III expansion has been detached from MSEZ phase I project vide EC amendment dated 13 th July 2012. MRPL shall be complying conditions relevant to



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S. No.	A. SPECIFIC CONDITIONS	COMPLIANCE
		them as part of their existing clearance.
(xxv)	The new standards/norms that are being proposed by the CPCB for Petrochemical Plants and Refineries shall be applicable for the proposed expansion unit. The company shall conform to the process vent standards for organic chemicals including non-VOCs and all possible VOCs i.e., TOCs standards and process vent standards for top priority chemicals. Regular monitoring will be carried out for VOC and HC and On-line monitors for VOC measurements may be installed.	Noted. The existing units in MSEZ are complying the conditions as per their approvals and submitting reports to KSPCB directly. MRPL phase III expansion has been detached from MSEZ phase I project vide EC amendment dated 13 th July 2012. MRPL shall be complying conditions relevant to them as part of their existing clearance.
(xxvi)	Regular monitoring of relevant parameters for the underground water in the surrounding areas shall be undertaken and the results shall be submitted to the relevant States Pollution Control Board.	Regular monitoring of ground water is being carried out in 10 locations & the reports are attached as Annexure-I . The locations are finalized in consultation with KSPCB.
(xxvii)	Solid waste generated as Pretreater and Reformer Catalysts, Sulphur guard absorbent and Alumina Balls shall be disposed off as per the authorization from the State Pollution Control Board.	Noted and each Individual unit obtaining separate approval for disposal of solid waste generated from their unit.
(xxviii)	Oily sludge shall be sent to melting pit treatment for recovery of oil. The recovered oil shall be recycled into the refinery system. The residual sludge will be stored in HDPE lined pit for disposal after treatment. The sludge shall be incinerated in the premises only.	The individual units complying the conditions and submitting the reports to KSPCB directly.
(xxix)	The company shall strictly follow all the recommendations mentioned in the Charter on Corporate Responsibility for Environmental Protection (CREP).	Compliance details for CREP is attached as Annexure II .
(xxx)	The Company shall harvest surface as well as rainwater from the rooftops of the buildings proposed in the expansion project and storm water drains to recharge the ground water and use the same water for the various activities of	Noted. OMPL has implemented rooftop buildings for rainwater harvesting. MSEZL has provided gate to main drain, there by



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S. No.	A. SPECIFIC CONDITIONS	COMPLIANCE
	the project to conserve fresh water.	pumping the water to reservoir for further use.
(xxxI)	Occupational Health Surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	Being Complied.
(xxxii)	The Company shall implement all the recommendations made in the Environmental Impact Assessment /EMP report and risk assessment report.	MSEZL has implemented most of the recommendations of EIA/EMP report and still some of the projects of MSEZL as per EIA/EMP recommendations are under way.
(xxxiii)	The company will undertake all relevant measures, as indicated during the Public Hearing for Improving the Socio-economic conditions of the surrounding area.	MSEZL is undertaking all relevant measures for improving the Socio-economic condition of the surrounding area as indicated during the Public Hearing.
(xxxiv)	With regard to R&R colony the project proponent shall obtain all requisite clearances as prescribed by the concerned agencies.	The R&R Colonies are developed after obtaining the requisite clearances from the concerned Departments like MoEF, KSPCB, Mangalore Urban Development Authority etc.

S. No	B. GENERAL CONDITIONS	Compliance
(i)	The project authorities shall strictly adhere to the stipulations made by the concerned State Pollution Control Board (SPCB) and the State Government.	Noted and being complied.
(ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	MSEZ obtained amendment to EC 1. Dated 13 July 2012 2. 27 Aug 2014, this involves widening of existing public road towards river side adjacent to MSEZ pipeline cum road Corridor in Reach-II area. 3. 18 th June 2015 for



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S. No	B. GENERAL CONDITIONS	Compliance
		development of Multi Product Units at Mangalore SEZ. Copies of amendments are submitted.
(iii)	At no time, the emissions shall be allowed to go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.	Noted and will be complied.
(iv)	Adequate number of influent and effluent quality monitoring stations shall be set up in consultation with the SPCB. Regular monitoring shall be carried out for relevant parameters for both surface and ground water.	The treated effluent parameters are measured through online measuring instruments installed at outlet line of Marine outfall pump house for the parameters like pH, DO, COD, TSS, and Conductivity. Further Ground water and surface water monitoring is carried out in the surrounding areas regularly & the reports are attached as Annexure-I . The locations are finalized in consultation with KSPCB.
(v)	Industrial wastewater shall be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May 1993 and 31 st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	The industrial wastewater from units are treated at CETP and pumped to marine outfall after meeting the prescribed discharge standards.
(vi)	The overall noise levels in and around the plant area shall be limited within the prescribed standards (85dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75dBA (day time) and 70dBA (night time).	Noted and noise levels are within the limit of prescribed standards.



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S. No	B. GENERAL CONDITIONS	Compliance
(vii)	The project authorities shall strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals etc. Necessary approvals from Chief Controller of Explosives must be obtained before commission of the expansion project. Requisite On-site and Off-site Disaster Management Plans will be prepared and implemented.	Noted and will be complied. MRPL phase III expansion has been detached From MSEZ phase I project vide EC amendment dated 13 th July 2012. MRPL shall be complying conditions relevant to them as part of their existing clearance.
(viii)	Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/ disposal of hazardous wastes.	Noted. Each Individual unit obtaining separate approval for disposal of hazardous waste generated from their unit.
(ix)	The project authorities shall provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purposes.	Noted and will be complied.
(x)	The stipulated conditions shall be monitored by the concerned Regional Office of this Ministry/Central Pollution Control Board/State Pollution Control Board. A six-monthly compliance report and the monitored data shall be submitted to them regularly. It shall also be displayed on the Website of the Company.	Compliance report is being submitted to MoEF/KSPCB on regular basis for every six months along with Ambient Air Quality monitoring report, Noise monitoring report & Ground water monitoring report. Compliance report is also displayed in the Company website.
(xi)	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at http://www.envfor.nic.in . This should be advertised within seven days from the date of issue of the clearance letter at least in two local	The information regarding the EC has been published in the newspapers and same was submitted to Ministry and KSPCB.



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S. No	B. GENERAL CONDITIONS	Compliance
	newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the concerned Regional office of this Ministry.	
(xii)	The date of Financial Closure and final approval of the project by the concerned authorities and the date of commencing the land development work as well as the commissioning of the project shall be informed to the Ministry and its Regional Office.	MSEZL has taken up the land development & infrastructure works from April 2011. MSEZL Board has approved the Business Plan for Infrastructure Development during Aug. 2012. The Zone is operational since 13 January 2014.
(xiii)	Proper Housekeeping and adequate occupational health programmes shall be taken up. Regular Occupational Health Surveillance Programme for the relevant diseases shall be carried out and the records shall be maintained properly for at least 30-40 years. Sufficient preventive measures shall be adopted to avoid direct exposure to emission and other Hydrocarbons etc.	Noted.
(xiv)	A separate environment management cell with full fledged laboratory facilities to carry out various management and monitoring functions shall be set up under the control of a Senior Executive.	Sr. General Manager (Environment & Civil) & Sr. Environmental Engineer are in place to take care of Environmental Issues. Horticulture Dy. General Manager is appointed for development and maintenance of Green belt.



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S. No	EC Amendment conditions dtd. 13 th July 2012	Compliance
(i)	Only the sector Specific shall be permitted in the SEZ & those units shall obtain separate Environmental Clearance as applicable.	MSEZL obtained amendment to EC for development of Multi Product units as Mangalore SEZ dated 18 th June 2015.
(ii)	Proponent shall enhance the allocation for the CSR activities from 2.5 to 5 % of the total cost & item-wise details along with time bound action plan shall be prepared & submitted to the Ministry's Regional office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.	MSEZL has already taken up CSR activities as per CSR guidelines.
(iii)	The green belt shall be 33% all along the periphery & width of the green belt shall be minimum 50 mts.	Noted and complied.

S. No	EC Amendment conditions dtd. 27 th Sep 2014	Compliance
(i)	The project proponent while carrying out the road widening works towards river side should not cause any impact to the river water flow and should be clear of river water way.	Complied.
(ii)	The project proponent to take up the bank protection works like stone pitching etc to avoid soil erosion of the banks.	Riverbank protection works as directed by WRDO are carried out.
(iii)	The project proponent to take up all adequate measures to mitigate the dust pollution during the road widening works.	Complied.
(iv)	The proponent shall not dump any construction wastes etc in the river portion.	Complied.



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S. No	EC Amendment conditions dtd. 18 th June 2015	Compliance
(i)	The individual Industries shall obtain prior Environmental Clearance as required under EIA Notification, 2006. The Project Proponent shall only allow the projects that have obtained the requisite Environmental Clearance.	Noted. Currently MSEZL has leased land to fish processing industries, Catasynth speciality chemicals limited, Syngene International Pvt Limited and they are obtained necessary approvals from the concerned department. The said industries are under operational stage.

With Regards

Eta Sreenivasulu

Sr. General Manager

Mangalore SEZ Ltd.

Encl.:

1. MSEZL Monitoring reports for Air, Water & Noise Environment.
2. Environmental compliance report & Environmental Monitoring Reports from OMPL.

Copy to: Environmental Officer, Karnataka State Pollution Control Board,
Mangalore.



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29 Dec 2021

MSEZL/MNG/R&R/COMP/2020-21

To,

The Director,
Southern Region, Regional Office,
Ministry of Environment and Forests,
Kendriya Sadan, 4th Floor, E&F Wings,
17th Main Road, 1st Block, Koramangala,
Bangalore – 560 034

RECEIVED
Regional Office
Karnataka State Pollution Control Board
Plot No.10-'B', Baikampady Industrial Area
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Sir,

Sub: Development of Residential Colony for Rehabilitation and Resettlement for
SEZ Complex at Kulai & Thokur village, Mangalore Taluk & District by M/s
Mangalore SEZ Limited, Mangalore.

Ref: 1) Environmental Clearance No: SEIAA: 140: CON: 2008, dated 25th June
2008.

With reference to above, we would like to submit the compliance report as on
date:

A. SPECIFIC CONDITIONS		
I. CONSTRUCTION PHASE		
(i)	Setup an Environment Management cell and ensure that the cell manages/maintains all the environmental aspects such as sewage treatment, solid waste disposal, maintenance of green belt areas etc, and in case the commercial space is sold/leased, then enter into agreement as per the draft agreement copy submitted, with the prospective buyers to ensure that they maintain the cell and take care of all environment concerns during the operation phase of the project. In addition sufficient fees should be levied so as to raise a corpus fund to maintain the Environment Cell.	MSEZL Environment Management cell is established to look after the environmental aspects like sewage treatment, Solid waste disposal & Development and maintenance of Green belt etc. The conditions specified regarding selling or leasing of Commercial space in R&R colony will be complied in case of selling /leasing of land is taken up.
(ii)	Appoint an Environment and Safety Engineer during the construction phase to take care of environment and safety aspects as committed.	Yes. Sr. Environmental Engineer and Sr. General Manager (Environment & Civil) are in place to take care of



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		Environmental issues and Safety aspects. Horticulture Dy. General Manager has appointed for development and maintenance of Green belt.
(iii)	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase. Sufficient number of toilets/bathrooms should be provided with required septic tanks and soak pits for construction work force.	Complied.
(iv)	A First Aid Room should be provided in the project both during construction and operation of the project.	MSEZL has established clinic and medical shop at 48 acres R&R colony to look after the Project Rehabilitated People. Currently, Clinic is hand overed to Primary Health centre Kuali.
(v)	Adequate drinking water and sanitary facilities should be provided for construction workers at the site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.	Works are completed.
(vi)	Provision should be made for the supply of fuel (kerosene or cooking gas) utensils such as pressure cookers etc, to the labourers during the construction phase.	Works are completed.
(vii)	All the labourers to be engaged for construction should be screened for health and adequately treated before engaging them to work at the site and detailed report submitted to SEIAA. Safety standards as per National Building Code (NBC) should be ensured.	Works are completed.
(viii)	For disinfection of waste water meant for uses other than toilet flushing, use ultra violet radiation and not chlorination. For recirculation of treated waste water for toilet flushing, use chlorination.	Works are completed.
(ix)	All the top soil excavated during construction activities should be stored for use in horticulture/Landscape development within	Works are completed.



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	the Project site.	
(x)	Disposal of construction waste during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	Works are completed.
(xi)	Soil and ground water samples should be tested at the project site during the construction phase to ascertain that there is no threat to ground water quality by leaching of heavy metals and or other toxic contaminants and report submitted to SEIAA.	The project is for development of R&R Colony and the scope of works is to develop the graded sites to Project displaced families with water and sanitation facilities. There are no chances of heavy metals or toxic contaminants produced from the activity. However, MSEZL has carried out the portability test for water & report has been forwarded.
(xii)	Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate water courses and the dumpsites for such material must be secured, so that they should not leach into the ground water.	Noted. The project is development of R&R Colony and the scope of works is to develop the graded sites to Project displaced families with water and sanitation facilities. There are no chances of construction spoils or Hazardous materials produced from the activity.
(xiii)	The diesel generator sets to be used during construction phase should be of low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.	Noted. No Diesel generators were used during the construction works.
(xiv)	Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.	Works are completed.
(xv)	Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely	Works are completed.



Mangalore SEZ Limited

Sy. No 168/3A, Plot No U-1
Administrative Building
Mangalore Special Economic Zone
Bajpe Village, Mangalore taluk
Dakshina Kannada (Dist)
Karnataka-574142

	monitored during construction phase. Adequate measures to reduce air and noise pollution during construction keeping in mind CPCB norms on noise limits.	
(xvi)	Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September 1999 and amended as on August 2003	The Project is for development of R&R Colonies with Infrastructure like roads, water & Drainage facilities. There is no requirement of building construction and hence usage of Fly ash does not arise. However, in future if MSEZL takes up any building the same will be complied.
(xvii)	Ready mixed concrete must be used in building construction.	The Project is for development of R&R Colonies with Infrastructure like roads, water & Drainage facilities. There is no requirement of building construction and hence usage of Ready mixed concrete does not arise. However, in future if MSEZL takes up any building the same will be complied.
(xviii)	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Complied by developing proper roadside drains and storm water drains.
(xix)	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices.	Complied.
(xx)	The Project Authorities shall not undertake either draws of Ground water or drilling of bore wells.	Complied.
(xxi)	Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.	Project is development of R&R colonies and there is no scope for MSEZ in plumbing work.
(xxii)	Treatment of 100% grey water by decentralized treatment should be done.	100 cum/day Skid mounted STP is erected already in 48 Acres & 35 Acres colony to treat the grey water.
(xxiii)	Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based	The Project is for development of R&R Colonies with Infrastructure like roads, water & Drainage facilities. There is



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Mangalore Special Economic Zone
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Dakshina Kannada (Dist)
Karnataka-574142

	control.	no requirement for usage of Showers, toilet flushing etc and the condition is not relevant to project implementation.
(xxiv)	Use of glass may be reduced by up to 40% of exposed area to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.	The Project is for development of R&R Colonies with Infrastructure like roads, water & Drainage facilities. There is no requirement for usage of glass etc and the condition is not relevant to project implementation.
(xxv)	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material.	The Project is for development of R&R Colonies with Infrastructure like roads, water & Drainage facilities. There is no requirement for construction of Building roof etc and the condition is not relevant to project implementation.
(xxvi)	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all air-conditioned spaces while it is optional for non-air conditioned spaces by use of appropriate thermal insulation material to fulfil the requirement.	The Project is for development of R&R Colonies with Infrastructure like roads, water & Drainage facilities. There is no requirement for construction of Building wall or air-conditioned spaces etc and the condition is not relevant to project implementation.

II. OPERATION PHASE

(i)	The installation of the Sewage Treatment Plant (STP) of 16.5 MLD capacity should be carried out before the construction of the second floor of the main structures is commenced and the plant shall be got certified by an independent expert and a report in this regard should be submitted to the SEIAA immediately. Discharge of treated sewage shall conform to the norms & standards of the Karnataka State Pollution Control Board. Treated sewage should be used for flushing, gardening, etc. as proposed.	It was informed to the Assessment Authority by vide our letter dated 22 nd July 2008, that MSEZL has not proposed installation of 16.5 MLD STP, but however the sewage generated in the proposed Colonies will be taken to the existing 16.5 MLD STP by Mangalore City Corporation.
(ii)	Rainwater harvesting for roof run-off with sufficient capacity artificial pond at ground	The project is development of R&R colonies. The scope of MSEZL is



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Bajpe Village, Mangalore taluk
Dakshina Kannada (Dist)
Karnataka-574142

	level for rainwater collection and also surface run-off harvesting should be implemented. Before recharging the surface runoff, pre-treatment must be done to remove suspended matter, oil and grease. Detailed rainwater harvesting plan should be submitted immediately.	development of plots and hand over to PDF's. The building construction is in the scope of PDF's.
(iii)	Ensure that the excess runoff rainwater from the green belt area, which is irrigated by treated water, does not get into infiltration pits and contaminate the ground water. Such excess flow should be safely let in to the storm water drains.	Complied.
(iv)	The solid waste generated should be properly collected and segregated before disposal to the City Municipality Facility.	Noted. Being complied.
(v)	Any hazardous waste including biomedical waste should be disposed of as per applicable Rules and norms with necessary approvals of the Karnataka State Pollution Control Board.	Noted and will be complied.
(vi)	As agreed to by the project proponent, develop minimum 13% of the project area i.e., minimum 50 acres area for green belt and plant with tree species at an espacement of 3mts x 3mts i.e. 1,111 plants/hectare. The balance 20% shall be made up by taking up tree planting on the road sides in the project and if required outside the project so as to ensure that 33% of the project area covered under green belt. The green belt design along the Periphery of the plot shall achieve attenuation factor conforming to the day and night noise standards prescribed for residential land use. The open spaces inside the plot should be suitably landscaped and covered with vegetation of indigenous variety.	The final developed area of MSEZL R&R colony is 111.24 Acres. The total green belt development area as per clearance is 36.71 Acres. Presently MSEZL has developed 12.08 acres of green belt inside project area and 24.30 acres of green belt outside the project area. The total green belt developed area by MSEZ is 36.38 Acres and balance 0.33acres will be complete by the end of year 2021.
(vii)	Incremental pollution loads on the ambient air quality; noise and water quality should be periodically monitored after commissioning of the project.	Noted.



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Sy. No 168/3A, Plot No U-1
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Bajpe Village, Mangalore taluk
Dakshina Kannada (Dist)
Karnataka-574142

(viii)	Application of Solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision for solar water heating. A hybrid system or fully solar system for the complex should be provided. Details in this regard should be submitted to the SEIAA.	The Project is for development of R&R Colonies with Infrastructure like roads, water & Drainage facilities. There is no requirement for solar water heating or lighting for gardens and the condition is not relevant to project implementation. The colony will be handed over to Mangalore City Corporation after development & O&M tenure issued. Hence the street lighting with MESCOM connections are provided.
(ix)	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking must be fully internalized and no public space should be utilized.	Complied.
(x)	A Report on the energy conservation measures confirming to energy conservation norms finalized by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R&U Factors etc and submit to the SEIAA in three months' time.	The Project is for development of R&R Colonies with Infrastructure like roads, water & Drainage facilities. There is no requirement for energy consumption equipment's or Building appliances and the condition is not relevant to project implementation.
B. GENERAL CONDITIONS		
(i)	The Environmental safeguards contained in the EIA Report should be implemented in letter and spirit.	Complied.
(ii)	All commitments made by the proponents in their application, and subsequent letters addressed to the SEAC/SEIAA should be accomplished before the construction work of the project is completed.	Complied.
(iii)	Six monthly monitoring reports should be submitted to the SEIAA and the Regional Office, MoEF, Bangalore, failing which action may be taken to cancel the Environmental Clearance certificate issued.	Noted. Being complied.
(iv)	Officials from the Department of Ecology and Environment, Bangalore/Regional Office of MoEF, Bangalore/Regional Director	The complete sets of documents submitted to MoEF/SEIAA were forwarded as directed in the



Mangalore SEZ Limited

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Dakshina Kannada (Dist)
Karnataka-574142

	(Environment) Dept. of Ecology and Environment, Mangalore/ Regional Officer, KSPCB Mangalore and KSPCB Bangalore who would be monitoring the implementation of Environmental safe guards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF/SEIAA should be forwarded to the CCF, Regional Office of MoEF, Bangalore/Department of Ecology and Environment, Bangalore /Regional Director, (Environment) Department of Ecology and Environment, Mangalore/Regional Officer, KSPCB Mangalore and KSPCB Bangalore.	Conditions. MSEZL will comply in providing the full cooperation to the Monitoring officers.
(v)	In the case of any change(s) in the scope of project, the project would require a fresh appraisal by this Authority.	Noted.
(vi)	The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Noted.
(vii)	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act 1980 and Wildlife (Protection) Act, 1972 etc shall be obtained, as applicable by project proponents from the competent authorities.	Noted.
(viii)	The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in vernacular language informing that the project has been accorded environmental clearance and copies of clearance letters are available with the Karnataka State pollution	Noted. The advertisement was made in three local Newspapers and the copy of the same was forwarded to all concerned as directed.



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Karnataka-574142

	Control board and may also be seen on the website of the Ecology and Environment Department at http://seiaa.kar.nic.in . The advertisement should be made within 7 days from the day of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of MoEF at Bangalore/Department of Environment and Ecology, Bangalore.	
(ix)	These stipulations would be enforced among others under the provisions of water (Prevention and Control of Pollution) Act, 1974, The Air (Prevention and Control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.	Noted.
(x)	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.	Noted.

The R&R Package is being implemented strictly as per Approved policy by State Government. In 1st PDF 1246 families out of 1253, In 2nd PDF 214 families out of 214, In 3rd PDF 146 families out of 147 families & 14 shops has been compensated with R&R Packages. Totally 1620 families have vacated their houses and the process is in progress for the balance.

10 nos. R&R colonies developed - 1415 sites allotted to eligible Project Displaced Families so far and balance 28 is in the process. 358 nominees of the displaced people given training at Karnataka Polytechnic (KPT) for diploma equivalent programs in Chemical, Mechanical & Electrical disciplines and 351 nominees have already been employed. 1628 nominees would have been eligible for employment out of which 880 nominees have opted for "one time"




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compensation in lieu of job and balance 748 nominees opted for the jobs. 632 nos. PDF nominees have already got employment out of 748 nos. empaneled. The process of handing over civic communities, parks & roads to local bodies and service to utility provider is under way in different stages.

With Regards



Emmanuel
29/12/2024

Sr. General Manager

Civil & Environment

Mangalore SEZ Ltd.

Copy to: 1) Environmental Officer, Karnataka State Pollution Control Board,
Mangalore.

Compliance to Charter on Corporate Responsibility for Environmental Protection (CREP)		
Sl. No.	Conditions	Compliance
1	Adoption of state-of-art technology State of Art technology will be adopted for both process technology as well sound engineering practices required for control of emission, at the stage of design itself in case of new plants	Not Applicable (NA). MSEZL being developer of Support Infrastructure for the MSEZ Industries. The Common MSEZ infrastructure facility like Boundary wall, Site Grading, Internal Roads, Corridor till New Mangalore Port, Water sourcing & internal distribution network, Fire water system, Power sourcing, Drains, Effluent Collection, Treatment & Disposal network, Housing, Central Business District & Office space has been taken up.
2	Management of storm water For the storm water generated from process area and tank farm area during initial hours of rain. An arrangement will be made for collection and oil separation including further treatment as required. Such arrangement will include provision for buffer tank (holding tank) and monitoring of effluent quality. This will be accomplished by June 2003.	MSEZL has constructed storm water drainage and collection system to collect the initial hours of rain water coming from SEZ zone. The collected water will be pumped to CETP for further treatment.
3	Effective detoxification and waste water treatment scheme In order to control high COD and persistent organic pollution including toxic constituents, the industry will select appropriate unit operations for pre-treatment of effluent within inside battery limit (ISBL) before sending to the biological treatment system(BTS) for better functioning of ETPs. Action plan for the same will be submitted within 6 months and implemented within one year (March,2004)	MSEZL has constructed 3.5MLD CETP for treatment industrial effluents. Presently CETP is receiving effluent from fish processing industries and each unit has developed pretreatment technologies inside their premises and thereby reducing COD load on CETP.
4	Control of emission from combustion The industry will submit an action plan within six months for improving thermal efficiency and control of Nox	NA
5	Proper functioning of point source emission control systems The industry will make efforts for proper operation of pollution control system (mostly scrubbers) and attainment of desired efficiency within six months. The will include backup of power supply to the control equipment and arrangement for frequent sampling and analysis of all critical pollution in the tail gases	NA
6	Leak detection and repair (LDAR) programme As a good operating, the industry will adopt periodically leak detection and repair (LDAR) programme to check fugitive emissions within six months. The frequency of the programme will be proportionate to the risk potential of carrying fluid. Based on leak detection as per LDAR programme, action will be taken to eliminate fugitive emissions, this will be a continuous activity.	NA
7	Handling of halogenated organics The industry will submit an action plan within 6 months to ensure that no halogenated organics is sent to the flares in order to avoid formation of persistent organic pollutants. All HAPs had halogenated organics will be routed to the incineration system having end-on pollution control facility.	NA

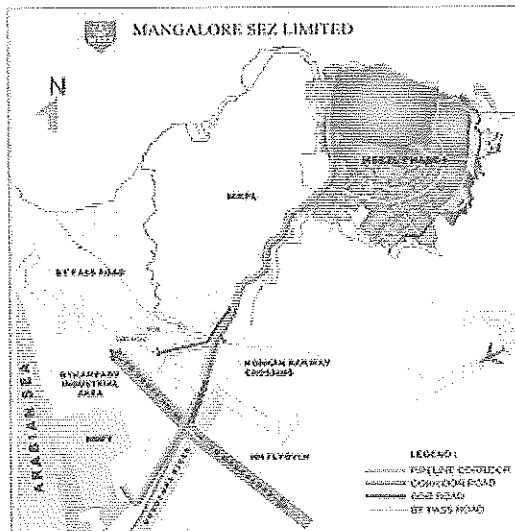
8	Control of fugitive emissions of carcinogenic compounds Fugitive emission of carcinogenic compounds (e.g. Benzene) will be controlled by closed vapor collection and recovery system. Measures will be taken to monitor health of the workers	NA
9	Management of solid waste Proper facilities will be provided for handling and storage of hazardous waste with manifest system in case transported to other places. For incinerable waste, properly designed incinerator will be installed within the premises or as a common facility. The non-incinerable hazardous waste should be disposed of in a secure-land fill.	MSEZL has allotted 9.5 acres of land for Solid & Hazardous Waste Management System. Presently each industry is having their own hazardous waste management system. MSEZL will develop Hazardous waste management system based on the users
10	Proper operation of incinerator Industry will check the design and will adopt sound engineering practices for proper operation of incinerators. Continuous monitoring will be done for operational parameters and specific parameters in tail gas to ensure the efficient functioning. This will be implemented within 3 months.	NA
11	Optimising the inventory of hazardous chemicals Efforts will be made to optimize the inventory, particularly of hazardous chemicals. Such information will be made available to the Regulatory Agencies (SBCBs) Inspector of Factory & District Collector	MSEZL has allotted 9.5 acres of land for Hazardous Waste Management System. Presently each industry is having their own hazardous waste management system. MSEZL will develop Hazardous waste management system based on the users available in future.
12	Self-regulation by industry through monitoring and environmental auditing Industry will go for self-assessment and regulation by conducting environmental auditing regularly, besides having regular monitoring of pollutants in air emission, liquid effluent and receiving environment.	Noted
13	Organizational restructuring and accreditation of environmental manager of industry. For self-evaluation, organizational restructuring will be done and the environmental manager of the industry will be accredited to bring professionalism in environmental management.	Noted



Mangalore SEZ Limited

ENVIRONMENTAL MONITORING REPORT

AMBIENT AIR QUALITY AND MONITORING REPORT FOR THE MONTH OF Jun 2021



Submitted By

M/s *OneEarth* Enviro Labs

(NABL Accredited, MOEF&CC Recognized Laboratory)

**KSIA Building, 1st Floor, Baikampady Industrial Estate, Mangaluru,
Karnataka – 575011 Email: oneearthenviro@gmail.com**

INDEX

Sl. No	DESCRIPTION	Page No.
1	Introduction - MSEZ	1
2	Environmental Monitoring	1
3	Scope and Methodology	1
3.1-3.1.7	Ambient Air Quality Sampling and Analysis	1-8
4	MSEZ Environmental Monitoring Schedule	9
5	Ambient Air Quality, Noise Level, Water Analysis Results	Test Reports (30 pages)

OneEarth Enviro Labs

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OEL/A/F/08

Certificate No. TC-7847

NABL ISO/IEC 17025:2017

ISO 9001:2015

ISO 45001:2018 Certified

MOEF & CC RECOGNISED

Report No: A/2021/JNA22

Report Date: 21-06-2021

AMBIENT AIR QUALITY ANALYSIS REPORT

Name: M/s Mangalore SEZ Limited
Address: Sy.No 168/3A | Plot.No U-1, Administrative Building, MSEZ, Bajpe Mangalore 574142
Sample Collected By: OneEarth Enviro Labs
Sampling Location: A22-WTP
Date of Sampling: 16-06-2021 Analysis Start Date: 16-06-2021
Date of Sample Receipt: 16-06-2021 Analysis End Date: 21-06-2021
Sampling Details: Ambient Air Quality Monitoring for 24 Hrs

Humidity % : 80.60 Temp °C : 30.00 Pressure mmHg : 744.66

Srl	Date and Time	16-06-2021 1315-1315	DLT	NAAQ	Protocol
	Parameters	Results ($\mu\text{g}/\text{m}^3$)		STD	
1	Particular Matter PM _{2.5}	29.66	2	60	IS 5182 : Part 24 RA:2019
2	Particular Matter PM ₁₀	72.21	5	100	IS 5182 : Part 23 RA:2017
3	Oxides of Sulphur SO ₂	BDL	4	80	IS 5182 : Part 2 RA:2017
4	Oxides of Nitrogen NO ₂	BDL	9.4	80	IS 5182 : Part 7 RA:2017
5	Ozone O ₃ (1 Hr)	13.77	2	180	IS 5182 : Part 9 RA:2019
6	Ammonia NH ₃ (1 Hr)	8.30	4	400	IS 5182 : Part 25 RA:2018
7	Lead Pb	BDL	0.01	1	IS 5182 : Part 22 RA:2019
8	Arsenic As (ng/m^3)	ND	1	6	CPCB Guidelines - Using AAS
9	Nickel Ni (ng/m^3)	BDL	3	20	IS 5182 : Part 26 RA:2020
10	Benzene C ₆ H ₆	ND	1	5	IS 5182 : Part 11 RA:2017
11	Benzo Pyrene C ₂₀ H ₁₂ (ng/m^3)	ND	2	1	IS 5182 : Part 12 RA:2017
12	Carbon Monoxide CO (mg/m^3)	ND	1.24	4	GAS Analyzer OEL/SOP/AAQ/A/10
13	Suspended Particulate Matter SPM	5.83	5	500	IS 5182 : Part 4 RA:2019

BDL-Below Detection Limit ND-Not Detectable DLT-Detectable Limit

NAAQ- National Ambient Air Quality

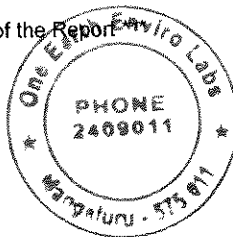
SPM if given contains only particulate matter size above 10 μm

STD=Standard $\mu\text{g}/\text{m}^3$ =Microgram per Meter Cube

Opinion

As per Standards mentioned in the report.
Report Status: - The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

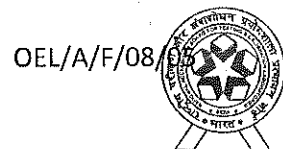
(Signature)
Authorised Signatory

(Murlidhar S M, Quality Manager)

Note: 1. The report shall not be reproduced wholly or in part, cannot be used as evidence in court of law. 2. The above result pertains only to the samples collected/received. 3. Samples will be destroyed after fifteen days from the date of issue of test reports unless otherwise specified. Perishable samples are not retained. 4. Any dispute arising out of this test report is subjected to Mangalore Jurisdiction only. 5. Total liability of our lab is limited to the invoice amount only. 6. Conformity statement might be affected due to measurement uncertainty

OneEarth Enviro Labs

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OEL/A/F/08/08

Certificate No. TC-7847

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MOEF & CC RECOGNISED

Report No: A/2021/JNA23

Report Date: 21-06-2021

AMBIENT AIR QUALITY ANALYSIS REPORT

Name: M/s Mangalore SEZ Limited
Address: Sy.No 168/3A | Plot No U-1, Administrative Building, MSEZ, Bajpe Mangalore 574142
Sample Collected By: OneEarth Enviro Labs
Sampling Location: 23-CETP
Date of Sampling: 16-06-2021 Analysis Start Date: 16-06-2021
Date of Sample Receipt: 16-06-2021 Analysis End Date: 21-06-2021
Sampling Details: Ambient Air Quality Monitoring for 24 Hrs

Humidity % : 80.60 Temp °C : 26.00 Pressure mmHg : 744.66

Srl	Date and Time	16-06-2021 1230-1230	DLT	NAAQ	Protocol
	Parameters	Results ($\mu\text{g}/\text{m}^3$)		STD	
1	Particular Matter PM2.5	26.87	2	60	IS 5182 : Part 24 RA:2019
2	Particular Matter PM10	34.97	5	100	IS 5182 : Part 23 RA:2017
3	Oxides of Sulphur SO ₂	BDL	4	80	IS 5182 : Part 2 RA:2017
4	Oxides of Nitrogen NO ₂	BDL	9.4	80	IS 5182 : Part 7 RA:2017
5	Ozone O ₃ (1 Hr)	24.78	2	180	IS 5182 : Part 9 RA:2019
6	Ammonia NH ₃ (1 Hr)	7.50	4	400	IS 5182 : Part 25 RA:2018
7	Lead Pb	ND	0.01	1	IS 5182 : Part 22 RA:2019
8	Arsenic As (ng/m^3)	ND	1	6	CPCB Guidelines - Using AAS
9	Nickel Ni (ng/m^3)	BDL	3	20	IS 5182 : Part 26 RA:2020
10	Benzene C ₆ H ₆	ND	1	5	IS 5182 : Part 11 RA:2017
11	Benzo Pyrene C ₂₀ H ₁₂ (ng/m^3)	ND	2	1	IS 5182 : Part 12 RA:2017
12	Carbon Monoxide CO (mg/m^3)	ND	1.24	4	GAS Analyzer OEL/SOP/AAQ/A/10
13	Suspended Particulate Matter SPM	5.71	5	500	IS 5182 : Part 4 RA:2019

BDL-Below Detection Limit ND-Not Detectable DLT-Detectable Limit

NAAQ- National Ambient Air Quality

SPM if given contains only particulate matter size above 10 μm

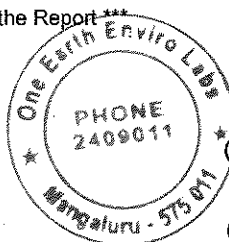
STD=Standard $\mu\text{g}/\text{m}^3$ =Microgram per Meter Cube

Opinion

As per Standards mentioned in the report.

Report Status: - The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory

(Murlidhar S M, Quality Manager)

Note: 1. The report shall not be reproduced wholly or in part, cannot be used as evidence in court of law. 2. The above result pertains only to the samples collected/received. 3. Samples will be destroyed after fifteen days from the date of issue of test reports unless otherwise specified. Perishable samples are not retained. 4. Any dispute arising out of this test report is subjected to Mangalore Jurisdiction only. 5. Total liability of our lab is limited to the invoice amount only. 6. Conformity statement might be affected due to measurement uncertainty

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OEL/A/F/08/



Certificate No. TC-7847

NABL ISO/IEC 17025:2017

ISO 9001:2015

ISO 45001:2018 Certified

MOEF & CC RECOGNISED

Report No: A/2021/JNA24

Report Date: 21-06-2021

AMBIENT AIR QUALITY ANALYSIS REPORT

Name: M/s Mangalore SEZ Limited
Address: Sy.No 168/3A | Plot No U-1, Administrative Building, MSEZ, Bajpe Mangalore 574142
Sample Collected By: OneEarth Enviro Labs
Sampling Location: 24-Permude
Date of Sampling: 16-06-2021 Analysis Start Date: 16-06-2021
Date of Sample Receipt: 16-06-2021 Analysis End Date: 21-06-2021
Sampling Details: Ambient Air Quality Monitoring for 24 Hrs

Humidity % : 80.60 Temp°C : 30.00 Pressure mmHg 744.66

Srl	Date and Time	16-06-2021 1545-1545	DLT	NAAQ	Protocol
	Parameters	Results ($\mu\text{g}/\text{m}^3$)		STD	
1	Particular Matter PM2.5	16.95	2	60	IS 5182 : Part 24 RA:2019
2	Particular Matter PM10	44.72	5	100	IS 5182 : Part 23 RA:2017
3	Oxides of Sulphur SO ₂	BDL	4	80	IS 5182 : Part 2 RA:2017
4	Oxides of Nitrogen NO ₂	BDL	9.4	80	IS 5182 : Part 7 RA:2017
5	Ozone O ₃ (1 Hr)	20.65	2	180	IS 5182 : Part 9 RA:2019
6	Ammonia NH ₃ (1 Hr)	BDL	4	400	IS 5182 : Part 25 RA:2018
7	Lead Pb	BDL	0.01	1	IS 5182 : Part 22 RA:2019
8	Arsenic As (ng/m^3)	ND	1	6	CPCB Guidelines - Using AAS
9	Nickel Ni (ng/m^3)	BDL	3	20	IS 5182 : Part 26 RA:2020
10	Benzene C ₆ H ₆	ND	1	5	IS 5182 : Part 11 RA:2017
11	Benzo Pyrene C ₂₀ H ₁₂ (ng/m^3)	ND	2	1	IS 5182 : Part 12 RA:2017
12	Carbon Monoxide CO (mg/m^3)	ND	1.24	4	GAS Analyzer OEL/SOP/AAQ/A/10
13	Suspended Particulate Matter SPM	8.04	5	500	IS 5182 : Part 4 RA:2019

BDL-Below Detection Limit ND-Not Detectable DLT-Detectable Limit

NAAQ- National Ambient Air Quality

SPM if given contains only particulate matter size above 10 μm

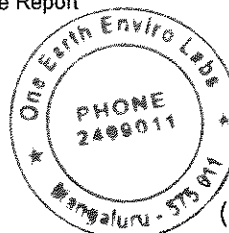
STD=Standard $\mu\text{g}/\text{m}^3$ =Microgram per Meter Cube

Opinion

As per Standards mentioned in the report.

Report Status: - The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory

(Murlidhar S M, Quality Manager)

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OneEarth Enviro Labs

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OEL/A/F/08

Certificate No. TC-7847

NABL ISO/IEC 17025:2017

ISO 9001:2015

ISO 45001:2018 Certified

MOEF & CC RECOGNISED

Report No: A/2021/JNA25

Report Date: 21-06-2021

AMBIENT AIR QUALITY ANALYSIS REPORT

Name: M/s Mangalore SEZ Limited
Address: Sy.No 168/3A | Plot No U-1, Administrative Building, MSEZ, Bajpe Mangalore 574142
Sample Collected By: OneEarth Enviro Labs
Sampling Location: A25-CETP
Date of Sampling: 17-06-2021
Date of Sample Receipt: 17-06-2021
Sampling Details: Ambient Air Quality Monitoring for 24 Hrs

Analysis Start Date : 17-06-2021

Analysis End Date : 21-06-2021

Humidity % : 78.60 Temp°C : 30.00 Pressure mmHg : 744.66

SrI	Date and Time	17-06-2021 1240-1240	DLT	NAAQ	Protocol
	Parameters	Results ($\mu\text{g}/\text{m}^3$)		STD	
1	Particular Matter PM2.5	18.50	2	60	IS 5182 : Part 24 RA:2019
2	Particular Matter PM10	31.29	5	100	IS 5182 : Part 23 RA:2017
3	Oxides of Sulphur SO ₂	BDL	4	80	IS 5182 : Part 2 RA:2017
4	Oxides of Nitrogen NO ₂	BDL	9.4	80	IS 5182 : Part 7 RA:2017
5	Ozone O ₃ (1 Hr)	26.16	2	180	IS 5182 : Part 9 RA:2019
6	Ammonia NH ₃ (1 Hr)	25.00	4	400	IS 5182 : Part 25 RA:2018
7	Lead Pb	BDL	0.01	1	IS 5182 : Part 22 RA:2019
8	Arsenic As (ng/m^3)	ND	1	6	CPCB Guidelines - Using AAS
9	Nickel Ni (ng/m^3)	BDL	3	20	IS 5182 : Part 26 RA:2020
10	Benzene C ₆ H ₆	ND	1	5	IS 5182 : Part 11 RA:2017
11	Benzo Pyrene C ₂₀ H ₁₂ (ng/m^3)	ND	2	1	IS 5182 : Part 12 RA:2017
12	Carbon Monoxide CO (mg/m^3)	ND	1.24	4	GAS Analyzer OEL/SOP/AAQ/A/10
13	Suspended Particulate Matter SPM	5.64	5	500	IS 5182 : Part 4 RA:2019

BDL-Below Detection Limit ND-Not Detectable DLT-Detectable Limit

NAAQ- National Ambient Air Quality

SPM if given contains only particulate matter size above 10 μm

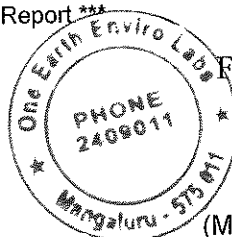
STD=Standard $\mu\text{g}/\text{m}^3$ =Microgram per Meter Cube

Opinion

As per Standards mentioned in the report.

Report Status: - The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory

(Murlidhar S M, Quality Manager)

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MOEF & CC RECOGNISED

Report No: A/2021/JNA26

Report Date: 21-06-2021

AMBIENT AIR QUALITY ANALYSIS REPORT

Name: M/s Mangalore SEZ Limited
Address: Sy.No 168/3A | Plot No U-1, Administrative Building, MSEZ, Bajpe Mangalore 574142
Sample Collected By: OneEarth Enviro Labs
Sampling Location: A26-WTP
Date of Sampling: 17-06-2021 Analysis Start Date : 17-06-2021
Date of Sample Receipt: 17-06-2021 Analysis End Date : 21-06-2021
Sampling Details: Ambient Air Quality Monitoring for 24 Hrs

Humidity % : 78.60 Temp°C : 30.00 Pressure mmHg : 744.66

Srl	Date and Time	17-06-2021 1330-1330	DLT	NAAQ	Protocol
	Parameters	Results ($\mu\text{g}/\text{m}^3$)		STD	
1	Particular Matter PM2.5	20.66	2	60	IS 5182 : Part 24 RA:2019
2	Particular Matter PM10	87.91	5	100	IS 5182 : Part 23 RA:2017
3	Oxides of Sulphur SO ₂	BDL	4	80	IS 5182 : Part 2 RA:2017
4	Oxides of Nitrogen NO ₂	BDL	9.4	80	IS 5182 : Part 7 RA:2017
5	Ozone O ₃ (1 Hr)	30.29	2	180	IS 5182 : Part 9 RA:2019
6	Ammonia NH ₃ (1 Hr)	20.83	4	400	IS 5182 : Part 25 RA:2018
7	Lead Pb	BDL	0.01	1	IS 5182 : Part 22 RA:2019
8	Arsenic As (ng/m^3)	ND	1	6	CPCB Guidelines - Using AAS
9	Nickel Ni (ng/m^3)	BDL	3	20	IS 5182 : Part 26 RA:2020
10	Benzene C ₆ H ₆	ND	1	5	IS 5182 : Part 11 RA:2017
11	Benzo Pyrene C ₂₀ H ₁₂ (ng/m^3)	ND	2	1	IS 5182 : Part 12 RA:2017
12	Carbon Monoxide CO (mg/m^3)	ND	1.24	4	GAS Analyzer OEL/SOP/AAQ/A/10
13	Suspended Particulate Matter SPM	12.70	5	500	IS 5182 : Part 4 RA:2019

BDL-Below Detection Limit ND-Not Detectable DLT-Detectable Limit

NAAQ- National Ambient Air Quality

SPM if given contains only particulate matter size above 10 μm

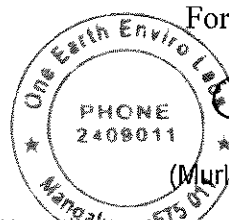
STD=Standard $\mu\text{g}/\text{m}^3$ =Microgram per Meter Cube

Opinion

As per Standards mentioned in the report.

Report Status: - The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory

(Muralidhar S M, Quality Manager)

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MOEF & CC RECOGNISED

Report No: A/2021/JNA27

Report Date: 21-06-2021

AMBIENT AIR QUALITY ANALYSIS REPORT

Name: M/s Mangalore SEZ Limited
Address: Sy.No 168/3A | Plot No U-1, Administrative Building, MSEZ, Bajpe Mangalore 574142
Sample Collected By: OneEarth Enviro Labs
Sampling Location: A27-Permude
Date of Sampling: 17-06-2021 Analysis Start Date: 17-06-2021
Date of Sample Receipt: 17-06-2021 Analysis End Date: 21-06-2021
Sampling Details: Ambient Air Quality Monitoring for 24 Hrs

Humidity % : 78.60 Temp °C : 30.00 Pressure mmHg 744.66

Srl	Date and Time	17-06-2021 1600-1600	DLT	NAAQ	Protocol
	Parameters	Results ($\mu\text{g}/\text{m}^3$)		STD	
1	Particular Matter PM2.5	22.87	2	60	IS 5182 : Part 24 RA:2019
2	Particular Matter PM10	73.37	5	100	IS 5182 : Part 23 RA:2017
3	Oxides of Sulphur SO ₂	BDL	4	80	IS 5182 : Part 2 RA:2017
4	Oxides of Nitrogen NO ₂	BDL	9.4	80	IS 5182 : Part 7 RA:2017
5	Ozone O ₃ (1 Hr)	19.27	2	180	IS 5182 : Part 9 RA:2019
6	Ammonia NH ₃ (1 Hr)	22.92	4	400	IS 5182 : Part 25 RA:2018
7	Lead Pb	BDL	0.01	1	IS 5182 : Part 22 RA:2019
8	Arsenic As (ng/m^3)	ND	1	6	CPCB Guidelines - Using AAS
9	Nickel Ni (ng/m^3)	ND	3	20	IS 5182 : Part 26 RA:2020
10	Benzene C ₆ H ₆	ND	1	5	IS 5182 : Part 11 RA:2017
11	Benzo Pyrene C ₂₀ H ₁₂ (ng/m^3)	ND	2	1	IS 5182 : Part 12 RA:2017
12	Carbon Monoxide CO (mg/m^3)	ND	1.24	4	GAS Analyzer OEL/SOP/AAQ/A/10
13	Suspended Particulate Matter SPM	10.55	5	500	IS 5182 : Part 4 RA:2019

BDL-Below Detection Limit ND-Not Detectable DLT-Detectable Limit

NAAQ- National Ambient Air Quality

SPM if given contains only particulate matter size above 10 μm

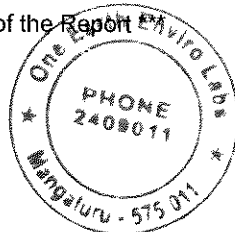
STD=Standard $\mu\text{g}/\text{m}^3$ =Microgram per Meter Cube

Opinion

As per Standards mentioned in the report.

Report Status: - The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

[Signature]
Authorised Signatory

(Murlidhar S M, Quality Manager)

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OEL/A/18/03



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ISO 45001:2018 Certified

MOEF & CC RECOGNISED

Report No: N/2021/JN11

Report Date: 26/06/2021

AMBIENT NOISE LEVEL MONITORING REPORT

Name of the Industry: M/s Mangalore SEZ Limited
Address: Survey No 168/3A | Plot No U-1, Administrative Building, MSEZ, Bajpe
Village, Mangalore Taluk, Karnataka 574142
Sample Collected By: OneEarth Enviro Labs
Sampling Location: MSEZ - CETP
Date of Sample Receipt: On site
Sampling Details: Noise Level Monitoring Day and Night 1322 – 0522 Hrs (16 Hrs)
Method Adopted: IS:9989.1981

SL NO	Date	Time	Parameters			L ₁₀	L ₅₀	L ₉₀	Leq	Limits
			Min	Max	L _{eq}					
1	16/06/2021	13.22	50.00	99.90	94.44					
2		14.22	50.00	99.90	91.94					
3		15.22	63.60	87.40	70.16					
4		16.22	54.50	76.60	57.62					
5		17.22	54.20	65.20	55.69					
6		18.22	50.00	99.90	69.95					
7		19.22	50.00	99.90	60.30					
8	17/06/2021	20.22	50.00	99.90	58.97	99.9	64.2	54.9	66.3	75dB
9		21.22	52.80	66.20	60.60					
10		22.22	53.70	66.50	61.52					
11		23.22	50.50	99.90	65.68					
12		0.22	63.00	79.60	64.83					
13		1.22	63.10	68.10	64.82					
14		2.22	63.20	68.70	64.62					
15		3.22	63.00	71.00	64.71					
16		4.22	63.00	70.80	64.37					
17		5.22	50.00	99.90	69.13					

L_{eq} - Antilog of Arithmetic mean of log value of samples on hourly basis

L₁₀ - Noise Level 10% of total run time

L₉₀ - Noise Level for 90% of total run time

L₅₀ - Noise Level 50% of total run time

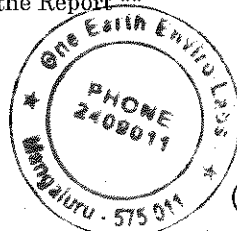
Leq - Antilog of Arithmetic mean of log value of all samples

Opinion

As per Standards mentioned in the report.

Report Status: - The sample meets the requirement as per relevant standard w.r.t above tested parameters.

** End of the Report **



For OneEarth Enviro Labs

Authorised Signatory
(Murlidhar S M, Quality Manager)

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MOEF & CC RECOGNISED

Report No: N/2021/JN14

Report Date: 26/06/2021

AMBIENT NOISE LEVEL MONITORING REPORT

Name of the Industry: M/s Mangalore SEZ Limited
Address: Survey No 168/3A | Plot No U-1, Administrative Building, MSEZ, Bajpe Village, Mangalore Taluk, Karnataka 574142
Sample Collected By: OneEarth Enviro Labs
Sampling Location: MSEZ - CETP
Date of Sample Receipt: On site
Sampling Details: Noise Level Monitoring Day and Night 1209 – 0409 Hrs (16 Hrs)
Method Adopted: IS:9989.1981

SL NO	Date	Time	Parameters			L ₁₀	L ₅₀	L ₉₀	Leq	Limits
			Min	Max	L _{eq}					
1	21/06/2021	12.09	68.10	99.90	71.34					
2		13.09	67.80	70.00	68.87					
3		14.09	68.20	99.90	69.61					
4		15.09	67.40	72.70	68.62					
5		16.09	67.50	72.60	68.79					75dB
6		17.09	67.40	72.60	68.94					
7		18.09	66.70	68.80	67.87					
8		19.09	66.80	70.80	68.33	69.6	68.6	67.7	68.8	
9	22/06/2021	20.09	66.80	72.80	68.04					
10		21.09	67.00	69.90	68.08					
11		22.09	67.00	78.70	68.57					
12		23.09	66.80	74.80	68.27					
13		0.09	67.10	71.70	68.73					70 dB
14		1.09	68.50	71.60	69.35					
15		2.09	67.60	70.80	68.89					
16		3.09	67.20	70.90	68.10					
17		4.09	67.70	73.20	68.60					

L_{eq} – Antilog of Arithmetic mean of log value of samples on hourly basis

L₁₀ – Noise Level 10% of total run time

L₉₀ – Noise Level for 90% of total run time

L₅₀ – Noise Level 50% of total run time

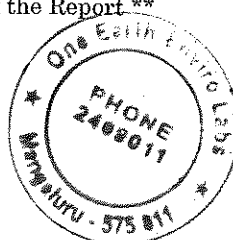
Leq – Antilog of Arithmetic mean of log value of all samples

Opinion

As per Standards mentioned in the report.

Report Status: - The sample meets the requirement as per relevant standard w.r.t above tested parameters.

** End of the Report **



For OneEarth Enviro Labs

(Signature)

Authorised Signatory
(Murlidhar S M, Quality Manager)

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MOEF & CC RECOGNISED

Report No: N/2021/JN12

Report Date: 26/06/2021

AMBIENT NOISE LEVEL MONITORING REPORT

Name of the Industry: M/s Mangalore SEZ Limited
Address: Survey No 168/3A | Plot No U-1, Administrative Building, MSEZ, Bajpe Village, Mangalore Taluk, Karnataka 574142
Sample Collected By: OneEarth Enviro Labs
Sampling Location: MSEZ - WTP
Date of Sample Receipt: On site
Sampling Details: Noise Level Monitoring Day and Night 1639 – 0839 Hrs (16 Hrs)
Method Adopted: IS:9989.1981

SL NO	Date	Time	Parameters			L ₁₀	L ₅₀	L ₉₀	Leq	Limits
			Min	Max	L _{eq}					
1	17/06/2021	16.39	57.00	81.50	59.87	60.0	55.3	53.9	56.4	75dB
2		17.39	58.10	81.00	59.33					
3		18.39	58.40	63.90	59.74					
4		19.39	58.60	65.30	59.97					
5		20.39	53.60	68.70	56.11					
6		21.39	53.70	64.50	57.92					
7		22.39	54.30	64.20	58.27					
8		23.39	53.90	64.00	55.93					
9	18/06/2021	0.39	53.80	57.80	54.83	60.0	55.3	53.9	56.4	70 dB
10		1.39	53.80	60.20	54.94					
11		2.39	53.00	57.80	54.32					
12		3.39	53.00	58.90	54.70					
13		4.39	52.80	60.80	54.39					
14		5.39	51.10	59.20	53.46					
15		6.39	52.50	64.80	54.32					
16		7.39	52.20	68.40	54.61					
17		8.39	52.50	82.00	56.04					

Leq – Antilog of Arithmetic mean of log value of samples on hourly basis

L₁₀ – Noise Level 10% of total run time

L₉₀ – Noise Level for 90% of total run time

L₅₀ – Noise Level 50% of total run time

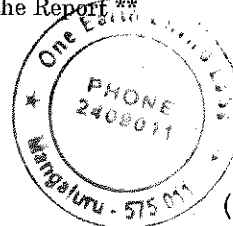
Leq – Antilog of Arithmetic mean of log value of all samples

Opinion

As per Standards mentioned in the report.

Report Status: - The sample meets the requirement as per relevant standard w.r.t above tested parameters.

** End of the Report **



For OneEarth Enviro Labs

Authorised Signatory
(Murlidhar S M, Quality Manager)

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OEL/AE/10/03



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MOEF & CC RECOGNISED

Report No: N/2021/JN16

Report Date: 26/06/2021

AMBIENT NOISE LEVEL MONITORING REPORT

Name of the Industry: M/s Mangalore SEZ Limited
Address: Survey No 168/3A | Plot No U-1, Administrative Building, MSEZ, Bajpe Village, Mangalore Taluk, Karnataka 574142
Sample Collected By: OneEarth Enviro Labs
Sampling Location: MSEZ - CETP
Date of Sample Receipt: On site
Sampling Details: Noise Level Monitoring Day and Night 1802 - 1 002 Hrs (16 Hrs)
Method Adopted: IS:9989.1981

SL NO	Date	Time	Parameters			L ₁₀	L ₅₀	L ₉₀	Leq	Limits
			Min	Max	L _{eq}					
1	23/06/2021	18.02	49.80	99.90	61.79					
2		19.02	48.80	99.90	76.65					
3		20.02	47.80	99.90	74.48					
4		21.02	50.00	99.90	77.50					
5		22.02	50.00	99.90	75.16					
6		23.02	49.20	99.90	64.75					
7		0.02	50.00	99.90	56.83					
8		1.02	50.00	99.90	58.70	99.9	67.4	51.0	67.8	75dB
9	24/06/2021	2.02	48.30	99.90	67.49					
10		3.02	64.30	73.70	66.95					
11		4.02	65.40	72.50	66.53					
12		5.02	65.40	71.30	67.07					
13		6.02	65.00	72.10	66.91					
14		7.02	67.30	76.50	68.74					
15		8.02	67.20	72.70	68.62					
16		9.02	67.80	76.00	68.82					
17		10.02	68.10	73.80	69.47					70 dB

L_{eq} - Antilog of Arithmetic mean of log value of samples on hourly basis

L₁₀ - Noise Level 10% of total run time

L₉₀ - Noise Level for 90% of total run time

L₅₀ - Noise Level 50% of total run time

Leq - Antilog of Arithmetic mean of log value of all samples

Opinion

As per Standards mentioned in the report.

Report Status: - The sample meets the requirement as per relevant standard w.r.t above tested parameters.

** End of the Report **



For OneEarth Enviro Labs

[Signature]

Authorised Signatory
(Murlidhar S M, Quality Manager)

Note : 1. The report shall not be reproduced wholly or in part, cannot be used as evidence in court of law. 2. The above result pertains only to the samples collected/received. 3. Any dispute arising out of this test report is subjected to Mangalore Jurisdiction only. 5. Total liability of our lab is limited to the invoice amount only. 6. Conformity statement might be affected due to measurement uncertainty.

OneEarth Enviro Labs

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MOEF & CC RECOGNISED

ULR NO TC78472100000 0362F

Chemical

Report No: W/2021/JN1604A

Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Permude Church Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample For Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)			
					Code:JN1604	IS 3025
Aluminium as Al	mg/L	0.03	0.2	0.04	ND	(Part 55 a):2003 RA: 2019
Boron as B	mg/L	0.5	1	0.02	ND	(Part57 b):2005 RA : 2017
Cadmium as Cd	mg/L	0.003	0.003	0.02	ND	OEL/SOP/W/74
Calcium as Ca	mg/L	75	200	1	8.22	(Part 40 a):1991 RA : 2019
Chloride as Cl	mg/L	250	1000	1	7.83	(Part 32,2):1998 (RA: 2019)
Chlorine Residual	mg/L	0.2	1	0.2	ND	(Part 26,3):1986 RA: 2019
Color	Color	5	15	1	1	(Part 4 a):1983 RA:2017
Conductivity	µS/cm	NS	NS	1	141.5	(Part 14):2013 RA : 2019
Cyanide as CN	mg/L	0.05	0.05	0.01	ND	APHA (2017) 4500 E
Fluoride as F	mg/L	1	1.5	0.5	BDL	(Part 60, A):2008 RA: 2019
Hexavalent Chromium as Cr+6	mg/L	0.01	0.01	0.1	ND	(Part 52):2003 RA: 2019
Lead as Pb	mg/L	0.01	0.01	0.05	ND	OEL/SOP/W/72
Magnesium as Mg	mg/L	30	100	1	7.99	(Part 46):1994 RA: 2019
Manganese as Mn	mg/L	0.02	0.02	0.79	ND	APHA - 3500-Mn B
Mercury as Hg	mg/L	0.001	0.001	0.005	ND	(Part 48 a): 1994 RA: 2019
Nitrate as NO ₃	mg/L	45	45	0.1	ND	(Part 34,3B):1988 RA: 2019
pH	Value	6.5	8.5	1	7.22	(Part 11,2):1983 RA: 2017
Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	0.01	ND	(Part 43a):1992 RA: 2019
Selenium as Se	mg/L	0.01	0.01	0.02	ND	(Part56 b): 2003 RA: 2019
Sulphate as SO ₄	mg/L	200	400	1	5	APHA - 4500- SO4C
Total Alkalinity as CaCO ₃	mg/L	200	600	1	65.22	(Part 23):1986 RA: 2019
Total Arsenic as As	mg/L	0.01	0.05	0.005	ND	(Part 37):1988 RA:2019 By AAS
Total Dissolved Solids	mg/L	500	2000	1	100	(Part 16):1984 RA: 2017
Total Hardness as CaCO ₃	mg/L	200	600	1	53.46	(Part21,A):2009 RA : 2019
Total Iron as Fe	mg/L	1	1	0.02	0.04	(Part53 a):2003 RA:2019
Turbidity	NTU	0.05	5	0.05	0.05	(Part 10):1984 RA : 2017
Zinc as Zn	mg/L	5	15	0.1	ND	(Part49 c):1994 RA: 2019

NS-Not Specified

Ag-Areable

ND-Not Detectable

DLT-Detection Limit

BDL-Below Detection Limit

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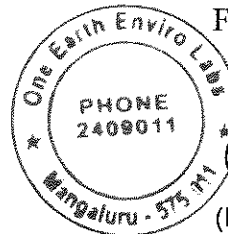
MOEF & CC RECOGNISED

ULR NO TC78472100000 0362F
Chemical

Report No: W/2021/JN1604A
Report Date : 21-06-2021

Opinion	As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.
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*** End of the Report ***



For OneEarth Enviro Labs



Authorised Signatory
(Murlidhar S M, Quality Manager)

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Report No: W/2021/JN1604-2
Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Permude Church Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

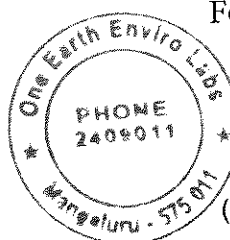
Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)		Code:JN1604	IS 3025
Odour	Ag	Ag	NS		Ag	Part 5 (2nd Revision) :2018
Taste	Ag	Ag	NS		Ag	Part 7 and 8
NS-Not Specified ND-Not Detectable DLT-Detection Limit BDL-Below DLT DL-Desired Limit UO-UnObjectionable						

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



[Signature]

Authorised Signatory
(Murlidhar S M, Quality Manager)

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ULR NO TC78472100000 0363F

Biological

Report No: W/2021/JN1604B

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/046
Sampling Location Permude Church Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 18-06-2021
Sampling Details Ground Water Sample for Micro Biological Analysis

Parameter	Unit	IS 10500-2012 STD PL (MAX)	Results Code:JN1604	Protocol APHA 2017 23rd Edition
E-Coli MPN	MPN/100ml	A	A (<1.8)	9221-G
Total Coliforms MPN	MPN/100ml	A	A (<1.8)	9221-B
PL-Permissible Limit	Std-Standard	P-Present	A-Absent	< 1.8: Shall be treated as – ve

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



[Signature]
Authorised Signatory

(Dr. Sandesh K, Technical Manager)

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ULR NO TC78472100000 0364F

Chemical

Report No: W/2021/JN1605A

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Permude Surface Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Surface Water Sample for Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)			
					Code:JN1605	IS 3025
Aluminium as Al	mg/L	0.03	0.2	0.04	ND	(Part 55 a):2003 RA: 2019
Boron as B	mg/L	0.5	1	0.02	ND	(Part57 b):2005 RA : 2017
Cadmium as Cd	mg/L	0.003	0.003	0.02	ND	OEL/SOP/W/74
Calcium as Ca	mg/L	75	200	1	9.87	(Part 40 a):1991 RA : 2019
Chloride as Cl	mg/L	250	1000	1	7.83	(Part 32,2):1998 (RA: 2019)
Chlorine Residual	mg/L	0.2	1	0.2	ND	(Part 26,3):1986 RA: 2019
Color	Color	5	15	1	1	(Part 4 a):1983 RA:2017
Conductivity	µS/cm	NS	NS	1	135.3	(Part 14):2013 RA : 2019
Cyanide as CN	mg/L	0.05	0.05	0.01	ND	APHA (2017) 4500 E
Fluoride as F	mg/L	1	1.5	0.5	BDL	(Part 60, A):2008 RA: 2019
Hexavalent Chromium as Cr+6	mg/L	0.01	0.01	0.1	ND	(Part 52):2003 RA: 2019
Lead as Pb	mg/L	0.01	0.01	0.05	ND	OEL/SOP/W/72
Magnesium as Mg	mg/L	30	100	1	3.99	(Part 46):1994 RA: 2019
Manganese as Mn	mg/L	0.02	0.02	0.79	ND	APHA - 3500-Mn B
Mercury as Hg	mg/L	0.001	0.001	0.005	ND	(Part 48 a): 1994 RA: 2019
Nitrate as NO ₃	mg/L	45	45	0.1	ND	(Part 34,3B):1988 RA: 2019
pH	Value	6.5	8.5	1	6.72	(Part 11,2):1983 RA: 2017
Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	0.01	ND	(Part 43a):1992 RA: 2019
Selenium as Se	mg/L	0.01	0.01	0.02	ND	(Part56 b): 2003 RA: 2019
Sulphate as SO ₄	mg/L	200	400	1	5	APHA - 4500- SO ₄ C
Total Alkalinity as CaCO ₃	mg/L	200	600	1	56.52	(Part 23):1986 RA: 2019
Total Arsenic as As	mg/L	0.01	0.05	0.005	ND	(Part 37):1988 RA:2019 By AAS
Total Dissolved Solids	mg/L	500	2000	1	96	(Part 16):1984 RA: 2017
Total Hardness as CaCO ₃	mg/L	200	600	1	41.12	(Part21,A):2009 RA : 2019
Total Iron as Fe	mg/L	1	1	0.02	0.6	(Part 53 a):2003 RA:2019
Turbidity	NTU	0.05	5	0.05	0.05	(Part 10):1984 RA : 2017
Zinc as Zn	mg/L	5	15	0.1	ND	(Part49 c):1994 RA: 2019

NS-Not Specified

Ag-Areable

ND-Not Detectable

DLT-Detection Limit

BDL-Below DLT

DL-Desired Limit

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Page 1 of 2

OneEarth Enviro Labs

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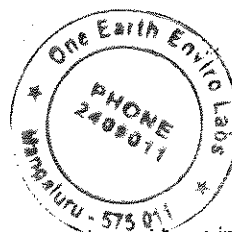
ULR NO TC78472100000 0364F
Chemical

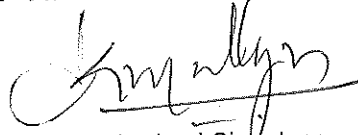
Report No: W/2021/JN1605A
Report Date 21-06-2021

Opinion	As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.
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*** End of the Report ***

For OneEarth Enviro Labs




Authorised Signatory
(Murlidhar S M, Quality Manager)

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Report No: W/2021/JN1605-2
Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

Sample Collected By OneEarth Enviro Labs
Sampling Location Permude Surface Water
Sample Appearance Clear
Date of Sampling 16-06-2021
Date of Sample Receipt 16-06-2021
Sampling Details Surface Water Sample for Chemical Analysis

Method OEL/SOP/W/0046
Analysis Start Date 16-06-2021
Analysis End Date 21-06-2021

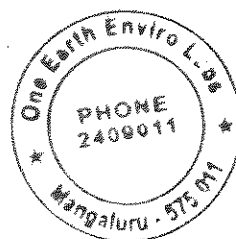
Parameter	Unit	IS 10500-2012 STD		DLT	Results Code: JN1605	Protocol IS 3025
		DL (MAX)	PL (MAX)			
Odour	Ag	Ag	NS		Ag	Part 5 (2nd Revision) :2018
Taste	Ag	Ag	NS		Ag	Part 7 and 8
NS-Not Specified DL-Desired Limit ND-Not Detectable DLT-Detection Limit BDL-Below DLT UO-UnObjectionable						

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



[Signature]
Authorised Signatory
(Murlidhar S M, Quality Manager)

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ULR NO TC78472100000 0365F

Biological

Report No: W/2021/JN1605B

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry

M/s Mangalore SEZ Limited

Address

Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

Sample Collected By

OneEarth Enviro Labs

Method OEL/SOP/W/0046

Sampling Location

Permude Surface Water

Sample Appearance

Clear

Date of Sampling

16-06-2021

Analysis Start Date

16-06-2021

Date of Sample Receipt

16-06-2021

Analysis End Date

18-06-2021

Sampling Details

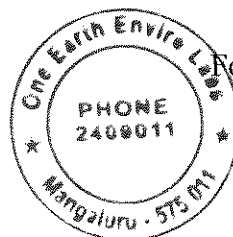
Surface Water Sample for Micro Biological Analysis

Parameter	Unit	IS 10500-2012 STD PL (MAX)	Results Code:JN1605	Protocol APHA 2017 23rd Edition
E-Coli MPN	MPN/100ml	A	A(<1.8)	9221-G
Total Coliforms MPN	MPN/100ml	A	A(<1.8)	9221-B
PL-Permissible Limit	Std-Standard	P-Present A-Absent	< 1.8: Shall be treated as - ve	

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

[Signature]

Authorised Signatory

(Dr. Sandesh K, Technical Manager)

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ULR NO TC78472100000 0366F

Chemical

Report No: W/2021/JN1606A
Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Permude Bajpe Village Boundry Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results Code: JN1606	Protocol IS 3025
		DL (MAX)	PL (MAX)			
Aluminium as Al	mg/L	0.03	0.2	0.04	BDL	(Part 55 a):2003 RA: 2019
Boron as B	mg/L	0.5	1	0.02	ND	(Part 57 b):2005 RA : 2017
Cadmium as Cd	mg/L	0.003	0.003	0.02	ND	OEL/SOP/W/74
Calcium as Ca	mg/L	75	200	1	1.64	(Part 40 a):1991 RA : 2019
Chloride as Cl	mg/L	250	1000	1	9.79	(Part 32,2):1998 (RA: 2019)
Chlorine Residual	mg/L	0.2	1	0.2	ND	(Part 26,3):1986 RA: 2019
Color	Color	5	15	1	1	(Part 4 a):1983 RA:2017
Conductivity	µS/cm	NS	NS	1	54.66	(Part 14):2013 RA : 2019
Cyanide as CN	mg/L	0.05	0.05	0.01	ND	APHA (2017) 4500 E
Fluoride as F	mg/L	1	1.5	0.5	BDL	(Part 60, A):2008 RA: 2019
Hexavalent Chromium as Cr+6	mg/L	0.01	0.01	0.1	ND	(Part 52):2003 RA: 2019
Lead as Pb	mg/L	0.01	0.01	0.05	ND	OEL/SOP/W/72
Magnesium as Mg	mg/L	30	100	1	1.99	(Part 46):1994 RA: 2019
Manganese as Mn	mg/L	0.02	0.02	0.79	ND	APHA - 3500-Mn B
Mercury as Hg	mg/L	0.001	0.001	0.005	ND	(Part 48 a): 1994 RA: 2019
Nitrate as NO ₃	mg/L	45	45	0.1	10.6	(Part 34,3B):1988 RA: 2019
pH	Value	6.5	8.5	1	4.76	(Part 11,2):1983 RA: 2017
Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	0.01	ND	(Part 43a):1992 RA: 2019
Selenium as Se	mg/L	0.01	0.01	0.02	ND	(Part 56 b): 2003 RA: 2019
Sulphate as SO ₄	mg/L	200	400	1	ND	APHA - 4500- SO4C
Total Alkalinity as CaCO ₃	mg/L	200	600	1	8.7	(Part 23):1986 RA: 2019
Total Arsenic as As	mg/L	0.01	0.05	0.005	ND	(Part 37):1988 RA:2019 By AAS
Total Dissolved Solids	mg/L	500	2000	1	76	(Part 16):1984 RA: 2017
Total Hardness as CaCO ₃	mg/L	200	600	1	12.34	(Part 21,A):2009 RA : 2019
Total Iron as Fe	mg/L	1	1	0.02	0.24	(Part 53 a):2003 RA:2019
Turbidity	NTU	0.05	5	0.05	0.05	(Part 10):1984 RA : 2017
Zinc as Zn	mg/L	5	15	0.1	ND	(Part 49 c):1994 RA: 2019

NS-Not Specified

Ag-Areeable

ND-Not Detectable

DLT-Detection Limit

BDL-Below DL DL-Desired Limit

OneEarth Enviro Labs

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ISO 9001:2015

ISO 45001:2018 Certified

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ULR NO TC78472100000 0366F
Chemical

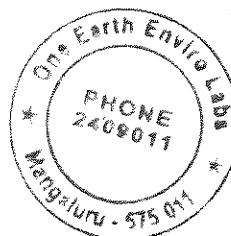
Report No: W/2021/JN1606A
Report Date : 21-06-2021

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



Authorised Signatory
(Murlidhar S M, Quality Manager)

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OneEarth Enviro Labs

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Mangaluru - 575 011. Ph: 0824-240 9011 Mob: +91 87625 39077
Email: oneearthenviro@gmail.com Website: oneearthenvirolabs.com

OEL/W/F/13/00

ISO 9001:2015

ISO 45001:2018 Certified

MOEF & CC RECOGNISED

Report No: W/2021/JN1606-2
Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry Address M/s Mangalore SEZ Limited
Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs
Sampling Location Permude Bajpe Village Boundry Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021
Date of Sample Receipt 16-06-2021
Sampling Details Ground Water Sample for Chemical Analysis
Method OEL/SOP/W/0046
Analysis Start Date 16-06-2021
Analysis End Date 21-06-2021

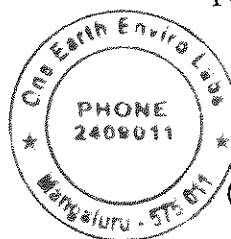
Parameter	Unit	IS 10500-2012 STD		DLT	Results Code:JN1606	Protocol IS 3025
		DL (MAX)	PL (MAX)			
Odour	Ag	Ag	NS		Ag	Part 5 (2nd Revision) :2018
Taste	Ag	Ag	NS		Ag	Part 7 and 8
		NS-Not Specified	DL-Desired Limit	ND-Not Detectable	DLT-Detection Limit	BDL-Below DLT
						UO-UnObjectionable

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



[Signature]

Authorised Signatory
(Murlidhar S M, Quality Manager)

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ULR NO TC78472100000 0367F

Biological

Report No: W/2021/JN1606B

Report Date 21-06-2021

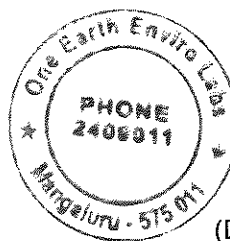
WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/046
Sampling Location Permude Bajpe Village Boundry Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 18-06-2021
Sampling Details Ground Water Sample for Micro Biological Analysis

Parameter	Unit	IS 10500-2012 STD DL (MAX)	Results Code:JN1606	Protocol APHA 2017 23rd Edition
E-Coli MPN	MPN/100ml	A	A(<1.8)	9221-G
Total Coliforms MPN	MPN/100ml	A	A(<1.8)	9221-B
PL-Permissible Limit	Std-Standard	P-Present A-Absent	< 1.8: Shall be treated as - ve	

Opinion	As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.
---------	----------------------------------------------------------------------------------------------------------------------------------------------------

*** End of the Report ***



For OneEarth Enviro Labs

[Signature]
Authorised Signatory

(Dr. Sandesh K, Technical Manager)

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ULR NO TC78472100000 0368F

Chemical

Report No: W/2021/JN1607A

Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Kalavar Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)			IS 3025
Aluminium as Al	mg/L	0.03	0.2	0.04	ND	(Part 55 a):2003 RA: 2019
Boron as B	mg/L	0.5	1	0.02	ND	(Part 57 b):2005 RA : 2017
Cadmium as Cd	mg/L	0.003	0.003	0.02	ND	OEL/SOP/W/74
Calcium as Ca	mg/L	75	200	1	3.29	(Part 40 a):1991 RA : 2019
Chloride as Cl	mg/L	250	1000	1	9.79	(Part 32,2):1998 (RA: 2019)
Chlorine Residual	mg/L	0.2	1	0.2	ND	(Part 26,3):1986 RA: 2019
Color	Color	5	15	1	1	(Part 4 a):1983 RA:2017
Conductivity	µS/cm	NS	NS	1	61.7	(Part 14):2013 RA : 2019
Cyanide as CN	mg/L	0.05	0.05	0.01	ND	APHA (2017) 4500 E
Fluoride as F	mg/L	1	1.5	0.5	BDL	(Part 60, A):2008 RA: 2019
Hexavalent Chromium as Cr+6	mg/L	0.01	0.01	0.1	ND	(Part 52):2003 RA: 2019
Lead as Pb	mg/L	0.01	0.01	0.05	ND	OEL/SOP/W/72
Magnesium as Mg	mg/L	30	100	1	1.99	(Part 46):1994 RA: 2019
Manganese as Mn	mg/L	0.02	0.02	0.79	ND	APHA - 3500-Mn B
Mercury as Hg	mg/L	0.001	0.001	0.005	ND	(Part 48 a): 1994 RA: 2019
Nitrate as NO ₃	mg/L	45	45	0.1	2.24	(Part 34,3B):1988 RA: 2019
pH	Value	6.5	8.5	1	6.54	(Part 11,2):1983 RA: 2017
Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	0.01	ND	(Part 43a):1992 RA: 2019
Selenium as Se	mg/L	0.01	0.01	0.02	ND	(Part 56 b): 2003 RA: 2019
Sulphate as SO ₄	mg/L	200	400	1	10	APHA - 4500- SO4C
Total Alkalinity as CaCO ₃	mg/L	200	600	1	8.7	(Part 23):1986 RA: 2019
Total Arsenic as As	mg/L	0.01	0.05	0.005	ND	(Part 37):1988 RA:2019 By AAS
Total Dissolved Solids	mg/L	500	2000	1	72	(Part 16):1984 RA: 2017
Total Hardness as CaCO ₃	mg/L	200	600	1	16.45	(Part 21,A):2009 RA : 2019
Total Iron as Fe	mg/L	1	1	0.02	0.12	(Part 53 a):2003 RA:2019
Turbidity	NTU	0.05	5	0.05	0.05	(Part 10):1984 RA : 2017
Zinc as Zn	mg/L	5	15	0.1	ND	(Part 40 b):1994 RA: 2019

NS-Not Specified

Ag-Areeable

ND-Not Detectable

DLT-Detection Limit

BDL-Below DLT

DL-Desired Limit

PHONE
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OneEarth Enviro Labs

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ULR NO TC78472100000 0368F
Chemical

Report No: W/2021/JN1607A
Report Date : 21-06-2021

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



Authorised Signatory
(Murlidhar S M, Quality Manager)

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Report No: W/2021/JN1607-2
Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

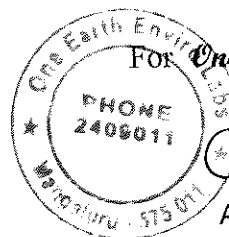
Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Kalavar Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results Code:JN1607	Protocol IS 3025
		DL (MAX)	PL (MAX)			
Odour	Ag	Ag	NS		Ag	Part 5 (2nd Revision) :2018
Taste	Ag	Ag	NS		Ag	Part 7 and 8
NS-Not Specified DL-Desired Limit ND-Not Detectable DLT-Detection Limit BDL-Below DLT UO-UnObjectionable						

** End of Report **

Opinion	As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.
---------	----------------------------------------------------------------------------------------------------------------------------------------------------

*** End of the Report ***



For OneEarth Enviro Labs
Authorised Signatory
(Murlidhar S M, Quality Manager)

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OEL/W/E/13/00

ULR NO TC78472100000 0369F

Biological

Report No: W/2021/JN1607B

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/046
Sampling Location Kalavar Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 18-06-2021
Sampling Details FALSE Water Sample for Micro Biological Analysis

Parameter	Unit	IS 10500-2012 STD	Results	Protocol
		DL (MAX)	Code: JN1607	APHA 2017 23rd Edition
E-Coli MPN	MPN/100ml	A	A(<1.8)	9221-G
Total Coliforms MPN	MPN/100ml	A	A(<1.8)	9221-B
PL-Permissible Limit	Std-Standard	P-Present A-Absent	< 1.8: Shall be treated as - ve	

Opinion	As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.
---------	----------------------------------------------------------------------------------------------------------------------------------------------------

*** End of the Report ***



For OneEarth Enviro Labs

[Signature]

Authorised Signatory

(Dr. Sandesh K, Technical Manager)

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ULR NO TC78472100000 0370F
Chemical

Report No: W/2021/JN1608A
Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Shanthigudde Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample For Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)			
Aluminium as Al	mg/L	0.03	0.2	0.04	ND	(Part 55 a):2003 RA: 2019
Boron as B	mg/L	0.5	1	0.02	ND	(Part57 b):2005 RA : 2017
Cadmium as Cd	mg/L	0.003	0.003	0.02	ND	OEL/SOP/W/74
Calcium as Ca	mg/L	75	200	1	9.87	(Part 40 a):1991 RA : 2019
Chloride as Cl	mg/L	250	1000	1	5.87	(Part 32,2):1998 (RA: 2019)
Chlorine Residual	mg/L	0.2	1	0.2	ND	(Part 26,3):1986 RA: 2019
Color	Color	5	15	1	1	(Part 4 a):1983 RA:2017
Conductivity	µS/cm	NS	NS	1	150.96	(Part 14):2013 RA : 2019
Cyanide as CN	mg/L	0.05	0.05	0.01	ND	APHA (2017) 4500 E
Fluoride as F	mg/L	1	1.5	0.5	BDL	(Part 60, A):2008 RA: 2019
Hexavalent Chromium as Cr+6	mg/L	0.01	0.01	0.1	ND	(Part 52):2003 RA: 2019
Lead as Pb	mg/L	0.01	0.01	0.05	ND	OEL/SOP/W/72
Magnesium as Mg	mg/L	30	100	1	6.99	(Part 46):1994 RA: 2019
Manganese as Mn	mg/L	0.02	0.02	0.79	ND	APHA - 3500-Mn B
Mercury as Hg	mg/L	0.001	0.001	0.005	ND	(Part 48 a): 1994 RA: 2019
Nitrate as NO ₃	mg/L	45	45	0.1	ND	(Part 34,3B):1988 RA: 2019
pH	Value	6.5	8.5	1	6.55	(Part 11,2):1983 RA: 2017
Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	0.01	ND	(Part 43a):1992 RA: 2019
Selenium as Se	mg/L	0.01	0.01	0.02	ND	(Part56 b): 2003 RA: 2019
Sulphate as SO ₄	mg/L	200	400	1	5	APHA - 4500- SO4C
Total Alkalinity as CaCO ₃	mg/L	200	600	1	78.26	(Part 23):1986 RA: 2019
Total Arsenic as As	mg/L	0.01	0.05	0.005	ND	(Part 37):1988 RA:2019 By AAS
Total Dissolved Solids	mg/L	500	2000	1	104	(Part 16):1984 RA: 2017
Total Hardness as CaCO ₃	mg/L	200	600	1	53.46	(Part21,A):2009 RA : 2019
Total Iron as Fe	mg/L	1	1	0.02	2.96	(Part 53 a):2003 RA:2019
Turbidity	NTU	0.05	5	0.05	0.1	(Part 10):1984 RA: 2017
Zinc as Zn	mg/L	5	15	0.1	ND	(Part49 c):1993 RA: 2019

NS-Not Specified

Ag-Areable

ND-Not Detectable

DLT-Detection Limit

BDL-Below DLT

DL-Desired Limit



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ULR NO TC78472100000 0370F
Chemical

Report No: W/2021/JN1608A
Report Date : 21-06-2021

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



[Signature]

Authorised Signatory

(Murlidhar S M, Quality Manager)

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Report No: W/2021/JN1608-2
Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

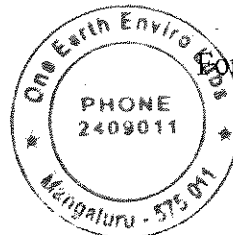
Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Shanthigudde Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results Code:JN1608	Protocol IS 3025
		DL (MAX)	PL (MAX)			
Odour	Ag	Ag	NS		Ag	Part 5 (2nd Revision) :2018
Taste	Ag	Ag	NS		Ag	Part 7 and 8
NS-Not Specified		ND-Not Detectable	DLT-Detection Limit	BDL-Below DLT	DL-Desired Limit	UO-

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



OneEarth Enviro Labs

Authorised Signatory
(Murlidhar S M, Quality Manager)

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OEL/W/F/13/00

ULR NO TC78472100000 0371F
Biological

Report No: W/2021/JN1608B
Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/046
Sampling Location Shanthigudde Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 18-06-2021
Sampling Details Ground Water Sample for Micro Biological Analysis

Parameter	Unit	IS 10500-2012 STD PL (MAX)	Results Code:JN1608	Protocol APHA 2017 23rd Edition
E-Coli MPN	MPN/100ml	A	A(<1.8)	9221-G
Total Coliforms MPN	MPN/100ml	A	A(<1.8)	9221-B
PL-Permissible Limit	Std-Standard	P-Present A-Absent	< 1.8: Shall be treated as – ve	

Opinion	As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.
---------	----------------------------------------------------------------------------------------------------------------------------------------------------

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory
(Dr. Sandesh K, Technical Manager)

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MOEF & CC RECOGNISED

ULR NO TC78472100000 0372F

Chemical

Report No: W/2021/JN1609A

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Oddidakala Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results Code:JN1609	Protocol IS 3025
		DL (MAX)	PL (MAX)			
Aluminium as Al	mg/L	0.03	0.2	0.04	BDL	(Part 55 a):2003 RA: 2019
Boron as B	mg/L	0.5	1	0.02	ND	(Part57 b):2005 RA : 2017
Cadmium as Cd	mg/L	0.003	0.003	0.02	ND	OEL/SOP/W/74
Calcium as Ca	mg/L	75	200	1	4.93	(Part 40 a):1991 RA : 2019
Chloride as Cl	mg/L	250	1000	1	9.79	(Part 32,2):1998 (RA: 2019)
Chlorine Residual	mg/L	0.2	1	0.2	ND	(Part 26,3):1986 RA: 2019
Color	Color	5	15	1	1	(Part 4 a):1983 RA:2017
Conductivity	µS/cm	NS	NS	1	69.53	(Part 14):2013 RA : 2019
Cyanide as CN	mg/L	0.05	0.05	0.01	ND	APHA (2017) 4500 E
Fluoride as F	mg/L	1	1.5	0.5	BDL	(Part 60, A):2008 RA: 2019
Hexavalent Chromium as Cr+6	mg/L	0.01	0.01	0.1	ND	(Part 52):2003 RA: 2019
Lead as Pb	mg/L	0.01	0.01	0.05	ND	OEL/SOP/W/72
Magnesium as Mg	mg/L	30	100	1	1.99	(Part 46):1994 RA: 2019
Manganese as Mn	mg/L	0.02	0.02	0.79	ND	APHA - 3500-Mn B
Mercury as Hg	mg/L	0.001	0.001	0.005	ND	(Part 48 a): 1994 RA: 2019
Nitrate as NO ₃	mg/L	45	45	0.1	2.84	(Part 34,3B):1988 RA: 2019
pH	Value	6.5	8.5	1	6.77	(Part 11,2):1983 RA: 2017
Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	0.01	ND	(Part 43a):1992 RA: 2019
Selenium as Se	mg/L	0.01	0.01	0.02	ND	(Part56 b): 2003 RA: 2019
Sulphate as SO ₄	mg/L	200	400	1	10	APHA - 4500- SO4C
Total Alkalinity as CaCO ₃	mg/L	200	600	1	13.04	(Part 23):1986 RA: 2019
Total Arsenic as As	mg/L	0.01	0.05	0.005	ND	(Part 37):1988 RA:2019 By AAS
Total Dissolved Solids	mg/L	500	2000	1	80	(Part 16):1984 RA: 2017
Total Hardness as CaCO ₃	mg/L	200	600	1	20.56	(Part21,A):2009 RA : 2019
Total Iron as Fe	mg/L	1	1	0.02	0.56	(Part 53 a):2003 RA:2019
Turbidity	NTU	0.05	5	0.05	0.05	(Part 10):1984 RA : 2017
Zinc as Zn	mg/L	5	15	0.1	ND	(Part 39 c):1994 RA: 2019

NS-Not Specified

Ag-Areeable

ND-Not Detectable

DLT-Detection Limit

BDL-Below DL DLT-Desired Limit

OneEarth Enviro Labs

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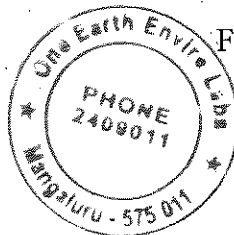
ULR NO TC78472100000 0372F
Chemical

Report No: W/2021/JN1609A
Report Date 21-06-2021

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory
(Murlidhar S M, Quality Manager)

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OneEarth Enviro Labs

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Report No: W/2021/JN1609-2
Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

Sample Collected By OneEarth Enviro Labs
Sampling Location Oddidakala Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021
Date of Sample Receipt 16-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

Method OEL/SOP/W/0046
Analysis Start Date 16-06-2021
Analysis End Date 21-06-2021

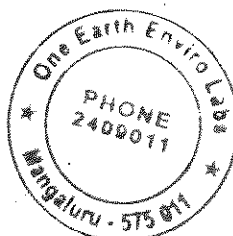
Parameter	Unit	IS 10500-2012 STD		DLT	Results Code: JN1609	Protocol IS 3025
		DL (MAX)	PL (MAX)			
Odour	Ag	Ag	NS		Ag	Part 5 (2nd Revision) :2018
Taste	Ag	Ag	NS		Ag	Part 7 and 8
NS-Not Specified DL-Desired Limit ND-Not Detectable DLT-Detection Limit BDL-Below DLT UO-UnObjectionable						

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



(Signature)

Authorised Signatory
(Murlidhar S M, Quality Manager)

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ULR NO TC78472100000 0373F

Biological

Report No: W/2021/JN1609B

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Oddidakala Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 18-06-2021
Sampling Details Ground Water Sample for Micro Biological Analysis

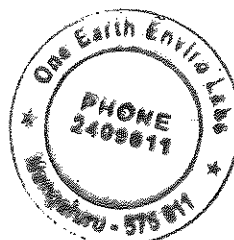
Parameter	Unit	IS 10500-2012 STD PL (MAX)	Results Code:JN1609	Protocol APHA 2017 23rd Edition
E-Coli MPN	MPN/100ml	A	A(<1.8)	9221-G
Total Coliforms MPN	MPN/100ml	A	A(<1.8)	9221-B
PL-Permissible Limit	Std-Standard	P-Present	A-Absent	< 1.8: Shall be treated as - ve

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



[Signature]

Authorised Signatory
(Dr. Sandesh K, Technical Manager)

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ULR NO TC78472100000 0374F

Chemical

Report No: W/2021/JN1610A

Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Chandrahas Nagar Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)		Code:JN1610	IS 3025
Aluminium as Al	mg/L	0.03	0.2	0.04	ND	(Part 55 a):2003 RA: 2019
Boron as B	mg/L	0.5	1	0.02	ND	(Part57 b):2005 RA : 2017
Cadmium as Cd	mg/L	0.003	0.003	0.02	ND	OEL/SOP/W/74
Calcium as Ca	mg/L	75	200	1	24.67	(Part 40 a):1991 RA : 2019
Chloride as Cl	mg/L	250	1000	1	9.79	(Part 32,2):1998 (RA: 2019)
Chlorine Residual	mg/L	0.2	1	0.2	ND	(Part 26,3):1986 RA: 2019
Color	Color	5	15	1	1	(Part 4 a):1983 RA:2017
Conductivity	µS/cm	NS	NS	1	215.4	(Part 14):2013 RA : 2019
Cyanide as CN	mg/L	0.05	0.05	0.01	ND	APHA (2017) 4500 E
Fluoride as F	mg/L	1	1.5	0.5	BDL	(Part 60, A):2008 RA: 2019
Hexavalent Chromium as Cr+6	mg/L	0.01	0.01	0.1	ND	(Part 52):2003 RA: 2019
Lead as Pb	mg/L	0.01	0.01	0.05	ND	OEL/SOP/W/72
Magnesium as Mg	mg/L	30	100	1	1.99	(Part 46):1994 RA: 2019
Manganese as Mn	mg/L	0.02	0.02	0.79	ND	APHA - 3500-Mn B
Mercury as Hg	mg/L	0.001	0.001	0.005	ND	(Part 48 a): 1994 RA: 2019
Nitrate as NO ₃	mg/L	45	45	0.1	8.7	(Part 34,3B):1988 RA: 2019
pH	Value	6.5	8.5	1	6.8	(Part 11,2):1983 RA: 2017
Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	0.01	ND	(Part 43a):1992 RA: 2019
Selenium as Se	mg/L	0.01	0.01	0.02	ND	(Part56 b): 2003 RA: 2019
Sulphate as SO ₄	mg/L	200	400	1	10	APHA - 4500- SO4C
Total Alkalinity as CaCO ₃	mg/L	200	600	1	65.22	(Part 23):1986 RA: 2019
Total Arsenic as As	mg/L	0.01	0.05	0.005	ND	(Part 37):1988 RA:2019 By AAS
Total Dissolved Solids	mg/L	500	2000	1	148	(Part 16):1984 RA: 2017
Total Hardness as CaCO ₃	mg/L	200	600	1	69.9	(Part21,A):2009 RA : 2019
Total Iron as Fe	mg/L	1	1	0.02	0.12	(Part 53 a):2003 RA:2019
Turbidity	NTU	0.05	5	0.05	0.1	(Part 10):1984 RA: 2017
Zinc as Zn	mg/L	5	15	0.1	ND	(Part 45 c):1994 RA: 2019

NS-Not Specified Ag-Areable ND-Not Detectable DLT-Detection Limit BDL-Below DLT DL-Desired Limit

OneEarth Enviro Labs

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ULR NO TC78472100000 0374F
Chemical

Report No: W/2021/JN1610A
Report Date : 21-06-2021

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory
(Murlidhar S M, Quality Manager)

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Report No: W/2021/JN1610-2
Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

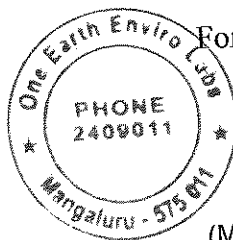
Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Chandrahas Nagar Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results Code: JN1610	Protocol IS 3025
		DL (MAX)	PL (MAX)			
Odour	Ag	Ag	NS		Ag	Part 5 (2nd Revision) :2018
Taste	Ag	Ag	NS		Ag	Part 7 and 8
NS-Not Specified DL-Desired Limit ND-Not Detectable DLT-Detection Limit BDL-Below DLT UO-UnObjectionable						

Opinion .

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs
[Signature]

Authorised Signatory
(Murlidhar S M, Quality Manager)

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ULR NO TC78472100000 0375F

Biological

Report No: W/2021/JN1610B

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

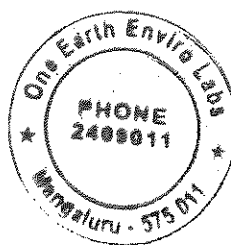
Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/046
Sampling Location Chandrahas Nagar Ground Water
Sample Appearance Clear
Date of Sampling 16-06-2021 Analysis Start Date 16-06-2021
Date of Sample Receipt 16-06-2021 Analysis End Date 18-06-2021
Sampling Details Ground Water Sample for Micro Biological Analysis

Parameter	Unit	IS 10500-2012 STD DL (MAX)	Results Code: JN1610	Protocol APHA 2017 23rd Edition
E-Coli MPN	MPN/100ml	A	A(<1.8)	9221-G
Total Coliforms MPN	MPN/100ml	A	A(<1.8)	9221-B
PL-Permissible Limit	Std-Standard	P-Present	A-Absent	< 1.8: Shall be treated as - ve

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory
(Dr. Sandesh K, Technical Manager)

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ULR NO TC78472100000 0366F

Chemical

Report No: w/2021/JN1804A

Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Non Processing Area Ground Water
Sample Appearance Clear
Date of Sampling 18-06-2021 Analysis Start Date 18-06-2021
Date of Sample Receipt 18-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results Code:JN1804	Protocol IS 3025
		DL (MAX)	PL (MAX)			
Aluminium as Al	mg/L	0.03	0.2	0.04	0.039	(Part 55 a):2003 RA: 2019
Boron as B	mg/L	0.5	1	0.02	ND	(Part57 b):2005 RA : 2017
Cadmium as Cd	mg/L	0.003	0.003	0.02	ND	OEL/SOP/W/74
Calcium as Ca	mg/L	75	200	1	8.22	(Part 40 a):1991 RA : 2019
Chloride as Cl	mg/L	250	1000	1	5.87	(Part 32,2):1998 (RA: 2019)
Chlorine Residual	mg/L	0.2	1	0.2	ND	(Part 26,3):1986 RA: 2019
Color	Color	5	15	1	1	(Part 4 a):1983 RA:2017
Conductivity	µS/cm	NS	NS	1	84.07	(Part 14):2013 RA : 2019
Cyanide as CN	mg/L	0.05	0.05	0.01	ND	APHA (2017) 4500 E
Fluoride as F	mg/L	1	1.5	0.5	0.23	(Part 60, A):2008 RA: 2019
Hexavalent Chromium as Cr+6	Secs	0.01	0.01	0.1	ND	(Part 52):2003 RA: 2019
Lead as Pb	mg/L	0.01	0.01	0.05	ND	OEL/SOP/W/72
Magnesium as Mg	mg/L	30	100	1	1.99	(Part 46):1994 RA: 2019
Manganese as Mn	mg/L	0.02	0.02	0.79	ND	APHA - 3500-Mn B
Mercury as Hg	mg/L	0.001	0.001	0.005	ND	(Part 48 a): 1994 RA: 2019
Nitrate as NO ₃	mg/L	45	45	0.1	1.34	(Part 34,3B):1988 RA: 2019
pH	Value	6.5	8.5	1	7.93	(Part 11,2):1983 RA: 2017
Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	0.01	ND	(Part 43a):1992 RA: 2019
Selenium as Se	mg/L	0.01	0.01	0.02	ND	(Part56 b): 2003 RA: 2019
Sulphate as SO ₄	mg/L	200	400	1	5	APHA - 4500- SO4C
Total Alkalinity as CaCO ₃	mg/L	200	600	1	30.44	(Part 23):1986 RA: 2019
Total Arsenic as As	mg/L	0.01	0.05	0.005	ND	(Part 37):1988 RA:2019 By AAS
Total Dissolved Solids	mg/L	500	2000	1	84	(Part 16):1984 RA: 2017
Total Hardness as CaCO ₃	mg/L	200	600	1	28.78	(Part21,A):2009 RA : 2019
Total Iron as Fe	mg/L	1	1	0.02	0.4	(Part 53 a):2003 RA:2019
Turbidity	NTU	0.05	5	0.05	0.05	(Part 19):1984 RA : 2017
Zinc as Zn	mg/L	5	15	0.1	ND	(Part49 c):1994 RA: 2019

NS-Not Specified Ag-Areeable ND-Not Detectable DLT-Detection Limit BDL-Below DLT DL-Desired Limit

OneEarth Enviro Labs

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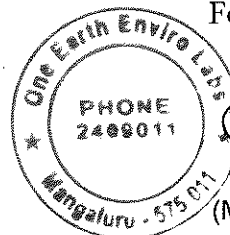
ULR NO TC78472100000 0366F
Chemical

Report No: W/2021/JN1804A
Report Date : 21-06-2021

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory
(Murlidhar S M, Quality Manager)

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Report No: W/2021/JN1804-2
Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location Non Processing Area Ground Water
Sample Appearance Clear
Date of Sampling 18-06-2021 Analysis Start Date 18-06-2021
Date of Sample Receipt 18-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

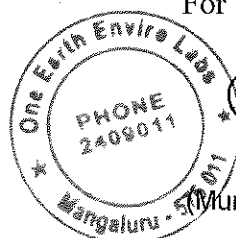
Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)			
Odour	Ag	Ag	NS		Ag	Part 5 (2nd Revision) :2018
Taste	Ag	Ag	NS		Ag	Part 7 and 8
NS-Not Specified DL-Desired Limit ND-Not Detectable DLT-Detection Limit BDL-Below DLT UO-UnObjectionable						

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



Authorised Signatory

(Murlidhar S M, Quality Manager)

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OneEarth Enviro Labs

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Mangaluru - 575 011. Ph: 0824-240 9011 Mob: +91 87625 39077
Email: oneearthenviro@gmail.com Website: oneearthenvirolabs.com



Certificate No. TC-7847

NABL ISO/IEC 17025:2017

ISO 9001:2015

ISO 45001:2018 Certified

MOEF & CC RECOGNISED

OEL/W/F/13/00

ULR NO TC78472100000 0367F

Biological

Report No: W/2021/JN1804B

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/046
Sampling Location Non Processing Area Ground Water
Sample Appearance Clear
Date of Sampling 18-06-2021 Analysis Start Date 18-06-2021
Date of Sample Receipt 18-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Micro Biological Analysis

Parameter	Unit	IS 10500-2012 STD DL (MAX)	Results Code:JN1804	Protocol APHA 2017 23rd Edition
E-Coli MPN	MPN/100ml	A	A(<1.8)	9221-G
Total Coliforms MPN	MPN/100ml	A	A(<1.8)	9221-B
PL-Permissible Limit	Std-Standard	P-Present A-Absent	< 1.8: Shall be treated as – ve	

Opinion	As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.
---------	----------------------------------------------------------------------------------------------------------------------------------------------------

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory
(Dr. Sandesh K, Technical Manager)

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W/F/13/00

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ULR NO TC78472100000 0364F

Chemical

Report No: W/2021/JN1803A

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry	M/s Mangalore SEZ Limited	Method	OEL/SOP/W/0046
Address	Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore		
Sample Collected By	OneEarth Enviro Labs		
Sampling Location	CETP Ground Water		
Sample Appearance	Clear		
Date of Sampling	18-06-2021	Analysis Start Date	18-06-2021
Date of Sample Receipt	18-06-2021	Analysis End Date	21-06-2021
Sampling Details	Ground Water Sample for Chemical Analysis		

Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)			
					Code: JN1803	IS 3025
Aluminium as Al	mg/L	0.03	0.2	0.04	ND	(Part 55 a):2003 RA: 2019
Boron as B	mg/L	0.5	1	0.02	ND	(Part 57 b):2005 RA : 2017
Cadmium as Cd	mg/L	0.003	0.003	0.02	ND	OEL/SOP/W/74
Calcium as Ca	mg/L	75	200	1	8.22	(Part 40 a):1991 RA : 2019
Chloride as Cl	mg/L	250	1000	1	9.79	(Part 32,2):1998 (RA: 2019)
Chlorine Residual	mg/L	0.2	1	0.2	ND	(Part 26,3):1986 RA: 2019
Color	Color	5	15	1	1	(Part 4 a):1983 RA:2017
Conductivity	µS/cm	NS	NS	1	80.73	(Part 14):2013 RA : 2019
Cyanide as CN	mg/L	0.05	0.05	0.01	ND	APHA (2017) 4500 E
Fluoride as F	mg/L	1	1.5	0.5	BDL	(Part 60, A):2008 RA: 2019
Hexavalent Chromium as Cr+6	Secs	0.01	0.01	0.1	ND	(Part 52):2003 RA: 2019
Lead as Pb	mg/L	0.01	0.01	0.05	ND	OEL/SOP/W/72
Magnesium as Mg	mg/L	30	100	1	1.99	(Part 46):1994 RA: 2019
Manganese as Mn	mg/L	0.02	0.02	0.79	ND	APHA - 3500-Mn B
Mercury as Hg	mg/L	0.001	0.001	0.005	ND	(Part 48 a): 1994 RA: 2019
Nitrate as NO ₃	mg/L	45	45	0.1	1.84	(Part 34,3B):1988 RA: 2019
pH	Value	6.5	8.5	1	7.26	(Part 11,2):1983 RA: 2017
Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	0.01	ND	(Part 43a):1992 RA: 2019
Selenium as Se	mg/L	0.01	0.01	0.02	ND	(Part 56 b): 2003 RA: 2019
Sulphate as SO ₄	mg/L	200	400	1	5	APHA - 4500- SO4C
Total Alkalinity as CaCO ₃	mg/L	200	600	1	26.09	(Part 23):1986 RA: 2019
Total Arsenic as As	mg/L	0.01	0.05	0.005	ND	(Part 37):1988 RA:2019 By AAS
Total Dissolved Solids	mg/L	500	2000	1	88	(Part 16):1984 RA: 2017
Total Hardness as CaCO ₃	mg/L	200	600	1	28.76	(Part 21,A):2009 RA : 2019
Total Iron as Fe	mg/L	1	1	0.02	0.44	(Part 53 a):2003 RA:2019
Turbidity	NTU	0.05	5	0.05	0.05	(Part 10):1984 RA : 2017
Zinc as Zn	mg/L	5	15	0.1	ND	(Part 49 c):1994 RA:2019

NS-Not Specified

Ag-Areeable

ND-Not Detectable

DLT-Detection Limit

BDL-Below DLT

DLT-Desired Limit

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ULR NO TC78472100000 0364F
Chemical

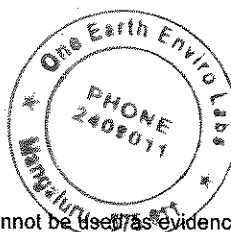
Report No: W/2021/JN1803A
Report Date 21-06-2021

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



Authorised Signatory
(Murlidhar S M, Quality Manager)

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OEL/W/F/13/00
MOEF & CC RECOGNISED

Report No: W/2021/JN1803-2
Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

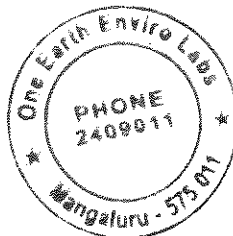
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location CETP Ground Water
Sample Appearance Clear
Date of Sampling 18-06-2021 Analysis Start Date 18-06-2021
Date of Sample Receipt 18-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)			
Odour	Ag	Ag	NS		Ag	Part 5 (2nd Revision) :2018
Taste	Ag	Ag	NS		Ag	Part 7 and 8
NS-Not Specified DL-Desired Limit ND-Not Detectable DLT-Detection Limit BDL-Below DLT UO-UnObjectionable						

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory
(Murlidhar S M, Quality Manager)

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ISO 45001:2018 Certified

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ULR NO TC78472100000 0365F

Biological

Report No: W/2021/JN1803B

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village, Mangalore

Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location CETP Ground Water
Sample Appearance Clear
Date of Sampling 18-06-2021 Analysis Start Date 18-06-2021
Date of Sample Receipt 18-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Micro Biological Analysis

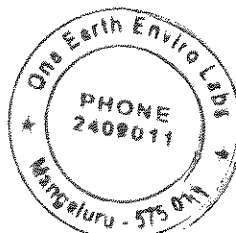
Parameter	Unit	IS 10500-2012 STD PL (MAX)	Results Code: JN1803	Protocol APHA 2017 23rd Edition
E-Coli MPN	MPN/100ml	A	A (<1.8)	9221-G
Total Coliforms MPN	MPN/100ml	A	A (<1.8)	9221-B
PL-Permissible Limit	Std-Standard	P-Present A-Absent	< 1.8: Shall be treated as - ve	

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



[Signature]
Authorised Signatory

(Dr. Sandesh K, Technical Manager)

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13/00

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ULR NO TC78472100000 0377F

Chemical

Report No: W/2021/JN1802A

Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location 10 ML Reservoir Water
Sample Appearance Clear
Date of Sampling 18-06-2021 Analysis Start Date 18-06-2021
Date of Sample Receipt 18-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample For Chemical Analysis

Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)			
Aluminium as Al	mg/L	0.03	0.2	0.04	0.04	(Part 55 a):2003 RA: 2019
Boron as B	mg/L	0.5	1	0.02	ND	(Part57 b):2005 RA : 2017
Cadmium as Cd	mg/L	0.003	0.003	0.02	ND	OEL/SOP/W/74
Calcium as Ca	mg/L	75	200	1	6.58	(Part 40 a):1991 RA : 2019
Chloride as Cl	mg/L	250	1000	1	5.87	(Part 32,2):1998 (RA: 2019)
Chlorine Residual	mg/L	0.2	1	0.2	ND	(Part 26,3):1986 RA: 2019
Color	Color	5	15	1	1	(Part 4 a):1983 RA:2017
Conductivity	µS/cm	NS	NS	1	79.27	(Part 14):2013 RA : 2019
Cyanide as CN	mg/L	0.05	0.05	0.01	ND	APHA (2017) 4500 E
Fluoride as F	mg/L	1	1.5	0.5	0.52	(Part 60, A):2008 RA: 2019
Hexavalent Chromium as Cr+6	Secs	0.01	0.01	0.1	ND	(Part 52):2003 RA: 2019
Lead as Pb	mg/L	0.01	0.01	0.05	ND	OEL/SOP/W/72
Magnesium as Mg	mg/L	30	100	1	1.99	(Part 46):1994 RA: 2019
Manganese as Mn	mg/L	0.02	0.02	0.79	ND	APHA - 3500-Mn B
Mercury as Hg	mg/L	0.001	0.001	0.005	ND	(Part 48 a): 1994 RA: 2019
Nitrate as NO ₃	mg/L	45	45	0.1	1.34	(Part 34,3B):1988 RA: 2019
pH	Value	6.5	8.5	1	7.55	(Part 11,2):1983 RA: 2017
Phenolic Compounds as C ₆ H ₅ OH	mg/L	0.001	0.002	0.01	ND	(Part 43a):1992 RA: 2019
Selenium as Se	mg/L	0.01	0.01	0.02	ND	(Part56 b): 2003 RA: 2019
Sulphate as SO ₄	mg/L	200	400	1	5	APHA - 4500- SO4C
Total Alkalinity as CaCO ₃	mg/L	200	600	1	30.44	(Part 23):1986 RA: 2019
Total Arsenic as As	mg/L	0.01	0.05	0.005	ND	(Part 37):1988 RA:2019 By AAS
Total Dissolved Solids	mg/L	500	2000	1	96	(Part 16):1984 RA: 2017
Total Hardness as CaCO ₃	mg/L	200	600	1	24.67	(Part21,A):2009 RA : 2019
Total Iron as Fe	mg/L	1	1	0.02	0.2	(Part 53 a):2003 RA:2019
Turbidity	NTU	0.05	5	0.05	0.05	(Part 10E):1987 RA : 2017
Zinc as Zn	mg/L	5	15	0.1	ND	(Part49 c):1994 RA: 2019

NS-Not Specified

Ag-Areeable

ND-Not Detectable

DLT-Detection Limit

BDL-Below

DL-Desired Limit

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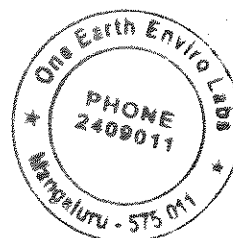
ULR NO TC78472100000 0377F
Chemical

Report No: W/2021/JN1802A
Report Date : 21-06-2021

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***



For OneEarth Enviro Labs

Authorised Signatory
(Murlidhar S M, Quality Manager)

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OEL/W/F/13/00

Report No: W/2021/JN1802-2
Report Date : 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/0046
Sampling Location 10 ML Reservior Water
Sample Appearance Clear
Date of Sampling 18-06-2021 Analysis Start Date 18-06-2021
Date of Sample Receipt 18-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Chemical Analysis

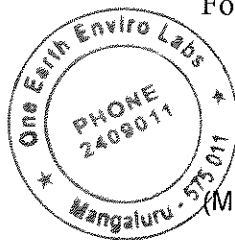
Parameter	Unit	IS 10500-2012 STD		DLT	Results	Protocol
		DL (MAX)	PL (MAX)			
Odour	Ag	Ag	NS		Ag	Part 5 (2nd Revision) :2018
Taste	Ag	Ag	NS		Ag	Part 7 and 8
NS-Not Specified ND-Not Detectable DLT-Detection Limit BDL-Below DLT DL-Desired Limit UO-UnObjectonable						

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



(Signature)

Authorised Signatory
(Murlidhar S M, Quality Manager)

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ISO 45001:2018 Certified

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ULR NO TC78472100000 0363F

Biological

Report No: W/2021/JN1802B

Report Date 21-06-2021

WATER QUALITY ANALYSIS REPORT

Name of the Industry M/s Mangalore SEZ Limited
Address Survey No 168/3A Plot No U-1, Administrative Building ,MSEZ, Bajpe Village,
Mangalore
Sample Collected By OneEarth Enviro Labs Method OEL/SOP/W/046
Sampling Location 10 ML Reservoir Water
Sample Appearance Clear
Date of Sampling 18-06-2021 Analysis Start Date 18-06-2021
Date of Sample Receipt 18-06-2021 Analysis End Date 21-06-2021
Sampling Details Ground Water Sample for Micro Biological Analysis

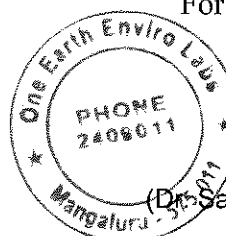
Parameter	Unit	IS 10500-2012 STD PL (MAX)	Results Code: JN1802	Protocol APHA 2017 23rd Edition
E-Coli MPN	MPN/100ml	A	A(<1.8)	9221-G
Total Coliforms MPN	MPN/100ml	A	A(<1.8)	9221-B
PL-Permissible Limit	Std-Standard	P-Present	A-Absent	< 1.8: Shall be treated as - ve

Opinion

As per Standards mentioned in the report. Report Status:- The sample meets the requirement as per relevant standard w.r.t above tested parameters.

*** End of the Report ***

For OneEarth Enviro Labs



[Signature]

Authorised Signatory

(Dr. Sandesh K, Technical Manager)

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(भारत सरकार का एक उद्यम)
(A Government of India Enterprise)

ओएनजीसी मंगलूर पेट्रोकेमिकल्स लिमिटेड

ONGC Mangalore Petrochemicals Limited

(मंगलूर रिफाइनरी एण्ड पेट्रोकेमिकल्स लिमिटेड की सहायक कंपनी)

(A Subsidiary of Mangalore Refinery and Petrochemicals Limited)

एमएसईजेड पेमुदे, मंगलूर - ५७४ ५०९. MSEZ, Permude, Mangaluru - 574 509.

CIN : U40107KA2006GOI041258 दूरभाष Tel.: 0824-2872000, फैक्स Fax: 0824-2872016. Website: www.ompl.co.in

REF: OMPL/PCB/SP/2020-21

Date: 11/6/2021

To:
The Environmental Officer
Regional Office
KSPCB
Baikampady, Mangalore-11

Mangalore SEZ Ltd. - 990 -
Documents & Contents subject to verification
Received date 14.06.2021
Received by V. P. Shetty

Dear Sir,

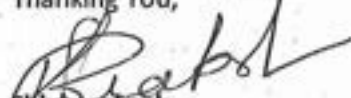
Sub: Submission of Environmental Monitoring Report for the Month of May, 2021

Ref: KSPCB Combined Consent Order No. AW-301949 dated 27th January, 2017

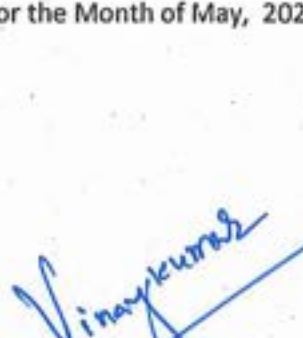
With respect to the above subject; we are herewith submitting the following Environmental Monitoring Reports and Production Report for the Month of May, 2021 respectively, enclosed herewith.

1. Ambient Air Quality Monitoring at 5 different locations in and around OMPL, enclosed as Annexure- A
2. Water Analysis Reports at 9 different locations in and around OMPL, as Annexure-B
3. Noise Level Monitoring Report at OMPL, as Annexure-C
4. Treated Effluent Analysis Report, Annexure-D
5. Returns Regarding Water Consumed, for the Month of May, 2021, as Annexure-E
6. Production Report as Annexure-F

Thanking You,


Shivaprakash
Sr. Manager- Env

CC: Member Secretary, KSPCB, Bangalore
CC: Head (Technical), MSEZ
CC: CEO, OMPL for info
CC: COO, OMPL for info.
CC: DGM- Production


for Mangalore
15/06/2021
Discuss for any
doubt



Certificate No. TC-5786

TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Ambient Air Quality Monitoring (AAQ)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	OMPL - East Side
Report Date	07.06.2021
Report No	HECS/AA/001-009/070621

RESULTS

MAY 2021 - Week		19-Week		20-Week		21-Week		22-Week		23-Week	Avg. Value
Parameters	NAAQ	03.05.21	06.05.21	10.05.21	13.05.21	17.05.21	20.05.21	24.05.21	27.05.21	31.05.21	
PM _{2.5} (µg/m ³)	60*	23.5	22.7	23.6	24.2	23.4	25.3	26.1	25.5	26.1	24.5
PM ₁₀ (µg/m ³)	100*	45.3	45.5	44.6	46.1	45.1	46.8	47.1	46.7	47.5	46.1
SO ₂ (µg/m ³)	80*	9.9	9.4	9.8	10.4	10.4	10.9	10.5	10.9	9.4	10.2
NO ₂ (µg/m ³)	80*	10.8	11.3	11.5	11.1	11.3	11.9	11.8	12.1	11.3	11.5
CO (mg/m ³)	2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
O ₃ (µg/m ³)	100**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NH ₃ (µg/m ³)	400*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (µg/m ³)	1*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As (ng/m ³)	6***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni (ng/m ³)	20***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene (µg/m ³)	5***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B(a)P (ng/m ³)	1***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: * : 24 hours average; ** : 8 hours average; *** : Annual average

Test Methods Followed:

PM_{2.5}: IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)

PM₁₀: HECS/AIR/SOP/002 Issue 02 dt. 13.06.2018 based on CPCB guidelines vol. I (2011)

SO₂: IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)

NO₂: IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

O₃: HECS/AIR/SOP/005 Issue 02 dt. 13.06.2018 based on CPCB guidelines vol. I (2011)

NH₃: HECS/AIR/SOP/006 Issue 02 dt. 13.06.2018 as per CPCB guidelines vol. I (2011)

CO: IS 5182 (Pt 10): 1999 (RA 2013)

Pb, As, Ni: In-house method based on CPCB guidelines vol. I (2011)

C₆H₆: GC FID/ GC MS based on IS: 5182 (Pt 11) : 2006 based on CPCB guidelines vol. I (2011)

B(a)P: In-house validated method based on CPCB guidelines vol. I (2011) & IS: 5182 (Pt 12): 2004

BDL =Below detection limit; DL - Detection Limit; PM_{2.5}-Particulate matter size less than 2.5 Micron (DL 10 µg/m³); PM₁₀-Particulate matter size less than 10 Micron (DL 5 µg/m³); SO₂ Sulphur dioxide (DL 5 µg/m³); NO₂ - Nitrogen-dioxide (DL 6 µg/m³); CO - Carbon Mono Oxide (DL 0.05 mg/m³); O₃-Ozone (DL 10 µg/m³); NH₃-Ammonia (DL 5 µg/m³); Pb-Lead (DL 0.05 µg/m³); As-Arsenic (DL 2 ng/m³); Ni-Nickel (DL 10 ng/m³); Benzene-(DL 1 µg/m³); B(a)P- Benzo -a-pyrene (DL 1 ng/m³); ng/m³: nanogram per cubic meter; µg/m³ - microgram per cubic meter.

CONCLUSION: ALL THE PARAMETERS MEET THE NAAQ STANDARDS

*****End of Report *****

Authorized Signatory

Dr K Ganesan - Laboratory and Quality Manager





Certificate No. TC-5786

TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Ambient Air Quality Monitoring (AAQ)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	Shantigudda
Report Date	07.06.2021
Report No	HECS/AA/010-018/070621

RESULTS

MAY 2021- Week		19-Week		20-Week		21-Week		22-Week		23-Week	Avg. Value
Parameters	NAAQ	03.05.21	06.05.21	10.05.21	13.05.21	17.05.21	20.05.21	24.05.21	27.05.21	31.05.21	
PM _{2.5} (µg/m ³)	60*	24.3	24.3	23.5	23.8	23.6	25.3	25.4	26.4	26.3	24.8
PM ₁₀ (µg/m ³)	100*	46.2	46.6	45.3	43.8	43.6	46.5	46.4	47.7	47.6	46.0
SO ₂ (µg/m ³)	80*	9.6	9.7	9.4	9.8	9.7	9.5	9.7	10.2	10.1	9.7
NO ₂ (µg/m ³)	80*	10.9	11.4	11.0	11.2	11.4	12.1	11.3	11.5	11.6	11.4
CO (mg/m ³)	2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
O ₃ (µg/m ³)	100**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NH ₃ (µg/m ³)	400*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (µg/m ³)	1*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As (ng/m ³)	6***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni (ng/m ³)	20***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene (µg/m ³)	5***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B(a)P (ng/m ³)	1***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: * : 24 hours average; ** : 8 hours average; *** : Annual average

Test Methods Followed:

 PM₁₀: IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)

 PM_{2.5}: HECS/AIR/SOP/002 Issue 02 dt. 13.06.2018 based on CPCB guidelines vol. I (2011)

 SO₂: IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)

 NO₂: IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

 O₃: HECS/AIR/SOP/005 Issue 02 dt. 13.06.2018 based on CPCB guidelines vol. I (2011)

 NH₃: HECS/AIR/SOP/006 Issue 02 dt. 13.06.2018 as per CPCB guidelines vol. I (2011)

CO: IS 5182 (Pt 10): 1999 (RA 2013)

Pb, As, Ni: In-house method based on CPCB guidelines vol. I (2011)

 C₆H₆: GC FID/ GC MS based on IS: 5182 (Pt 11) : 2006 based on CPCB guidelines vol. I (2011)

B(a)P: In-house validated method based on CPCB guidelines vol. I (2011) & IS: 5182 (Pt 12): 2004

BDL =Belo detection limit; DL - Detection Limit; PM_{2.5}-Particulate matter size less than 2.5 Micron (DL 10 µg/m³), PM₁₀-Particulate matter size less than 10 Micron (DL 5 µg/m³); SO₂ Sulphur dioxide (DL 5 µg/m³); NO₂ - Nitrogen-dioxide (DL 6 µg/m³); CO - Carbon Mono Oxide (DL 0.05 mg/m³); O₃-Ozone (DL 10 µg/m³); NH₃-Ammonia (DL 5 µg/m³); Pb-Lead (DL 0.05 µg/m³); As-Arsenic (DL 2 ng/m³); Ni-Nickel (DL 10 ng/m³); Benzene-(DL 1 µg/m³); B(a)P- Benzo-a-pyrene (DL 1 ng/m³); ng/m³: nanogram per cubic meter; µg/m³ - microgram per cubic meter.

CONCLUSION: ALL THE PARAMETERS MEET THE NAAQ STANDARDS

*****End of Report *****

Authorized Signatory

Dr K Genesan - Laboratory and Quality Manager

1. The report in full or part shall not be used for any promotional or publicity purpose without written consent by HECS organization. 2. Samples are not drawn by HECS unless otherwise mentioned. 3. Unless specifically requested by customer the test items will not be retained more than 15 days from the date of issue of test report. 4. Under no circumstances lab accepts any liability or loss / damage caused by use or misuse of test report after invoicing or issue of test report. 5. The test results relate only to the test items.

HECS/Q/FMT/50



Hubert Enviro Care Systems (P) Ltd.

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**Laboratory Services Division**

(Chemical & Biological Testing)

Recognized by MoEF, BIS

FSSAI Notified Laboratory

ISO 9001, 14001 & OHSAS 18001 Certified.

Certificate No. TC-5786

TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Ambient Air Quality Monitoring (AAQ)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	Tenka Ekkar
Report Date	07.06.2021
Report No	HECS/AA/019-027/070621

RESULTS

MAY 2021 - Week		19-Week		20-Week		21-Week		22-Week		23-Week	Avg. Value
Parameters	NAAQ	03.05.21	06.05.21	10.05.21	13.05.21	17.05.21	20.05.21	24.05.21	27.05.21	31.05.21	
PM _{2.5} (µg/m ³)	60*	24.6	26.8	25.8	25.1	25.4	25.7	27.1	27.2	25.7	25.9
PM ₁₀ (µg/m ³)	100*	43.1	44.8	45.4	45.2	43.5	44.5	45.9	46.4	45.1	44.9
SO ₂ (µg/m ³)	80*	9.3	9.1	9.3	9.5	9.5	9.6	10.2	10.1	9.6	9.6
NO ₂ (µg/m ³)	80*	11.4	10.6	10.9	10.6	11.0	11.4	11.5	11.1	11.5	11.1
CO (mg/m ³)	2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
O ₃ (µg/m ³)	100**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NH ₃ (µg/m ³)	400*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (µg/m ³)	1*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As (ng/m ³)	6***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni (ng/m ³)	20***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene (µg/m ³)	5***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B(a)P (ng/m ³)	1***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: * : 24 hours average; ** : 8 hours average; *** : Annual average

Test Methods Followed:PM₁₀: IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)PM_{2.5}: HECS/AIR/SOP/002 Issue 02 dt. 13.06.2018 based on CPCB guidelines vol. I (2011)SO₂: IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)NO₂: IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)O₃: HECS/AIR/SOP/005 Issue 02 dt. 13.06.2018 based on CPCB guidelines vol. I (2011)NH₃: HECS/AIR/SOP/006 Issue 02 dt. 13.06.2018 as per CPCB guidelines vol. I (2011)

CO: IS 5182 (Pt 10): 1999 (RA 2013)

Pb, As, Ni: In-house method based on CPCB guidelines vol. I (2011)

C₆H₆: GC FID/ GC MS based on IS: 5182 (Pt 11): 2006 based on CPCB guidelines vol. I (2011)

B(a)P: In-house validated method based on CPCB guidelines vol. I (2011) & IS: 5182 (Pt 12): 2004

BDL =Below detection limit; DL - Detection Limit; PM_{2.5}-Particulate matter size less than 2.5 Micron (DL 10 µg/m³),PM₁₀-Particulate matter size less than 10 Micron (DL 5 µg/m³); SO₂ Sulphur dioxide (DL 5 µg/m³); NO₂ - Nitrogen-di-oxide (DL 6 µg/m³); CO - Carbon Mono Oxide (DL 0.05 mg/m³); O₃-Ozone (DL 10 µg/m³); NH₃-Ammonia (DL 5 µg/m³);Pb-Lead (DL 0.05 µg/m³); As-Arsenic (DL 2 ng/m³); Ni-Nickel (DL 10 ng/m³); Benzene-(DL 1 µg/m³); B(a)P- Ben-zopyrene (DL 1 ng/m³); ng/m³: nanogram per cubic meter; µg/m³ - microgram per cubic meter.**CONCLUSION: ALL THE PARAMETERS MEET THE NAAQ STANDARDS**

*****End of Report *****

Authorized Laboratory

Dr K Ganesan - Laboratory and Quality Manager



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Laboratory Services Division

(Chemical & Biological Testing)

Recognized by MoEF, BIS

FSSAI Notified Laboratory

ISO 9001, 14001 & OHSAS 18001 Certified.

Certificate No. TC-5786

TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Ambient Air Quality Monitoring (AAQ)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	Premude Village
Report Date	07.06.2021
Report No	HECS/AA/028-036/070621

RESULTS

MAY 2021- Week		19-Week		20-Week		21-Week		22-Week		23-Week	Avg. Value
Parameters	NAAQS	03.05.21	06.05.21	10.05.21	13.05.21	17.05.21	20.05.21	24.05.21	27.05.21	31.05.21	
PM _{2.5} (µg/m ³)	60*	23.2	23.5	24.6	24.7	23.8	26.5	26.7	26.9	26.6	25.2
PM ₁₀ (µg/m ³)	100*	44.1	43.5	43.6	44.7	43.4	43.9	44.9	46.1	46.7	44.5
SO ₂ (µg/m ³)	80*	9.6	9.7	9.6	9.5	9.2	9.9	10.3	10.1	10.2	9.8
NO ₂ (µg/m ³)	80*	11.4	11.1	11.3	11.2	10.6	10.3	11.0	11.2	11.0	11.0
CO (mg/m ³)	2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
O ₃ (µg/m ³)	100**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NH ₃ (µg/m ³)	400*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (µg/m ³)	1*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As (ng/m ³)	6***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni (ng/m ³)	20***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene (µg/m ³)	5***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B(α)P (ng/m ³)	1***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: * 24 hours average; ** 8 hours average; *** Annual average

Test Methods Followed:

PM₁₀: IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)

PM_{2.5}: HECS/AIR/SOP/002 Issue 02 dt. 13.06.2018 based on CPCB guidelines vol. I (2011)

SO₂: IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)

NO₂: IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

O₃: HECS/AIR/SOP/005 Issue 02 dt. 13.06.2018 based on CPCB guidelines vol. I (2011)

NH₃: HECS/AIR/SOP/006 Issue 02 dt. 13.06.2018 as per CPCB guidelines vol. I (2011)

CO: IS 5182 (Pt 10): 1999 (RA 2013)

Pb, As, Ni: In-house method based on CPCB guidelines vol. I (2011)

C₆H₆: GC FID/ GC MS based on IS: 5182 (Pt 11): 2006 based on CPCB guidelines vol. I (2011)

B(α)P: In-house validated method based on CPCB guidelines vol. I (2011) & IS: 5182 (Pt 12): 2004

BDL =Below detection limit; DL - Detection Limit; PM_{2.5}-Particulate matter size less than 2.5 Micron (DL 40 µg/m³),

PM₁₀-Particulate matter size less than 10 Micron (DL 5 µg/m³); SO₂ Sulphur dioxide (DL 5 µg/m³); NO₂ - Nitrogen-di-

oxide (DL 6 µg/m³); CO - Carbon Mono Oxide (DL 0.05 mg/m³); O₃-Ozone (DL 10 µg/m³); NH₃-Ammonia (DL 5 µg/m³);

Pb-Lead (DL 0.05 µg/m³); As-Arsenic (DL 2 ng/m³); Ni-Nickel (DL 10 ng/m³); Benzene-(DL 1 µg/m³); B(α)P- Benzo(a)-

pyrene (DL 1 ng/m³); ng/m³: nanogram per cubic meter; µg/m³ - microgram per cubic meter.

CONCLUSION: ALL THE PARAMETERS MEET THE NAAQ STANDARDS

*****End of Report*****

Authorized Signatory

Dr K Ganesan - Laboratory and Quality Manager



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HECS/Q/FMT/50


TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Ambient Air Quality Monitoring (AAQ)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	OMPL - West Side
Report Date	07.06.2021
Report No	HECS/AA/037-045/070621

RESULTS

MAY 2021- Week		19-Week		20-Week		21-Week		22-Week		23-Week	Avg. Value
Parameters	NAAQ	03.05.21	06.05.21	10.05.21	13.05.21	17.05.21	20.05.21	24.05.21	27.05.21	31.05.21	
PM _{2.5} (µg/m ³)	60*	24.5	24.6	24.2	23.6	23.5	24.8	24.9	24.3	24.3	24.3
PM ₁₀ (µg/m ³)	100*	44.4	43.7	42.8	43.2	43.7	44.5	44.6	45.4	45.3	44.2
SO ₂ (µg/m ³)	80*	10.8	10.2	10.5	10.2	10.5	9.7	9.9	10.2	10.3	10.3
NO ₂ (µg/m ³)	80*	11.8	11.4	11.3	11.2	11.5	11.8	11.9	11.6	11.9	11.6
CO (mg/m ³)	2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
O ₃ (µg/m ³)	100***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NH ₃ (µg/m ³)	400*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (µg/m ³)	1*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As (ng/m ³)	6***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni (ng/m ³)	20***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene (µg/m ³)	5***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B(a)P (ng/m ³)	1***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: * : 24 hours average; ** : 8 hours average; *** : Annual average

Test Methods Followed:

PM₁₀: IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)

PM_{2.5}: HECS/AIR/SOP/002 Issue 02 dt. 13.06.2018 based on CPCB guidelines vol. I (2011)

SO₂: IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)

NO₂: IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)

O₃: HECS/AIR/SOP/005 Issue 02 dt. 13.06.2018 based on CPCB guidelines vol. I (2011)

NH₃: HECS/AIR/SOP/006 Issue 02 dt. 13.06.2018 as per CPCB guidelines vol. I (2011)

CO: IS 5182 (Pt 10): 1999 (RA 2013)

Pb, As, Ni: In-house method based on CPCB guidelines vol. I (2011)

C₆H₆: GC FID/ GC MS based on IS: 5182 (Pt 11) : 2006 based on CPCB guidelines vol. I (2011)

B(a)P: In-house validated method based on CPCB guidelines vol. I (2011) & IS: 5182 (Pt 12): 2004

BDL =Below detection limit; DL - Detection Limit; PM_{2.5}-Particulate matter size less than 2.5 Micron (DL 10 µg/m³), PM₁₀-Particulate matter size less than 10 Micron (DL 5 µg/m³); SO₂ Sulphur dioxide (DL 5 µg/m³); NO₂ - Nitrogen-dioxide (DL 6 µg/m³); CO - Carbon Mono Oxide (DL 0.05 mg/m³); O₃-Ozone(DL 10 µg/m³); NH₃-Ammonia (DL 5 µg/m³); Pb-Lead (DL 0.05 µg/m³); As-Arsenic (DL 2 ng/m³); Ni-Nickel (DL 10 ng/m³); Benzene-(DL 1 µg/m³); B(a)P- Benzo(a)pyrene (DL 1 ng/m³); ng/m³: nanogram per cubic meter; µg/m³ - microgram per cubic meter.

CONCLUSION: ALL THE PARAMETERS MEET THE NAAQ STANDARDS

*****End of Report *****

Authorized Signatory



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Certificate No. TC-5786

ANNEXURE - B.

Laboratory Services Division

(Chemical & Biological Testing)

Recognized by MoEF, BIS

FSSAI Notified Laboratory

ISO 9001, 14001 & OHSAS 18001 Certified.

TEST REPORT

Page 1 of 9

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	GW1 - Ground Water collected from Narayana Guru Community Hall, Premude
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	03.05.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	03.05.2021
Date of Analysis start & completion	03.05.2021 & 14.05.2021
Report Date	15.05.2021
Report No	HECS/W/001/030521

RESULTS

S.No.	Parametersmonitored	Test method followed	Units	Results	IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	7.00	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	3.5	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	58.7	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	21.8	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	38.6	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	23.2	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	BDL (DL 2)	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	110.8	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	BDL (DL 5)	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.4	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	5.7	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.21	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	Escherichia coli	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter; MPN- Most Probable Number; mL-Milliliter

CONCLUSION: GROUND WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500: 2012

End of Report

Authorized Signatory

Dr K Ganesan - Laboratory and Quality Manager



**TEST REPORT**

Page 2 of 9

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	GW2 - Ground Water collected from Gagnet Labour Colony
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	03.05.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	03.05.2021
Date of Analysis start & completion	03.05.2021 & 14.05.2021
Report Date	15.05.2021
Report No	HECS/W/002/030521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	7.58	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	0.1	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	130.0	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	33.6	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	120.1	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	19.0	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	11.2	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	170.8	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	BDL (DL 5)	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.82	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	8.3	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.14	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622 1981 (RA 2009)	MPN/100mL	Absent	Not Detectable
18.	<i>Escherichia coli</i>	IS1622 1981 (RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter;

MPN- Most Probable Number; mL-Milliliter

CONCLUSION: GROUND WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

Authorized Signatory
Dr K Ganesan - Laboratory and Quality Manager


TEST REPORT

Page 3 of 9

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	GW3 - Ground Water collected from L&T New Labour Colony
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	03.05.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	03.05.2021
Date of Analysis start & completion	03.05.2021 & 14.05.2021
Report Date	15.05.2021
Report No	HECS/W/003/030521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	7.42	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	3.0	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	67.1	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	13.4	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	51.5	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	23.2	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	8.15	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	110.8	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	10.5	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	BDL (DL 0.2)	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	6.4	45 max
15.	Iron as Fe	IS 3025 (Pt -53) 2003	mg/L	0.17	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS 3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	<i>Escherichia coli</i>	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter; MPN- Most Probable Number; mL-Milliliter

CONCLUSION: GROUND WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

Authorized Signatory
Dr K Ganesan - Laboratory and Quality Manager





TEST REPORT

Page 4 of 9

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	GW4 - Ground Water collected Near OMPL - ETP
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	06.05.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	06.05.2021
Date of Analysis start & completion	06.05.2021 & 20.05.2021
Report Date	21.05.2021
Report No	HECS/W/006/060521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.84	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	3.8	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	41.9	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	8.4	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	30.0	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	31.7	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	5.0	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	74.8	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	7.4	400 max
13.	Fluoride	IS 3025 (Pt -60) 2002	mg/L	0.47	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	5.5	45 max
15.	Iron as Fe	IS 3025 (Pt -53) 2003	mg/L	0.10	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS 3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS 1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	Escherichia coli	IS 1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter; MPN- Most Probable Number; mL-Milliliter

CONCLUSION: GROUND WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

Authorized Signatory

Dr K Ganesan - Laboratory and Quality Manager





TEST REPORT

Page 5 of 9

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	OW1 - Open Well Water collected from TenkaE'kar
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	03.05.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	03.05.2021
Date of Analysis start & completion	03.05.2021 & 14.05.2021
Report Date	15.05.2021
Report No	HECS/W/004/030521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	7.57	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	BDL (DL 0.1)	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	92.2	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	18.4	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	85.8	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	19.0	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	11.2	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	120.8	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	BDL (DL 5)	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.56	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	6.2	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.11	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	<i>Escherichia coli</i>	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter;

MPN- Most Probable Number; mL-Milliliter

CONCLUSION: OPENWELL WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

Authorized Signatory

Dr K Ganesan – Laboratory and Quality Manager



**TEST REPORT**

Page 6 of 9

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	OW2 - Open Well Water collected from Shantigudda Village
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	03.05.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	03.05.2021
Date of Analysis start & completion	03.05.2021 & 14.05.2021
Report Date	15.05.2021
Report No	HECS/W/005/030521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	7.00	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	0.3	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	130.0	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	31.9	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	120.1	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	19.0	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	12.2	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	160.8	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	BDL (DL 5)	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.43	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	8.6	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.2	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	<i>Escherichia coli</i>	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:- BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter;
MPN- Most Probable Number; mL-Milliliter

CONCLUSION: OPENWELL WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

Authorized Signatory
Dr K Ganesan - Laboratory and Quality Manager



**TEST REPORT**

Page 7 of 9

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	OW3 - Open Well Water collected from Premude Village
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	03.05.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	03.05.2021
Date of Analysis start & completion	03.05.2021 & 14.05.2021
Report Date	15.05.2021
Report No	HECS/W/006/030521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.95	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	BDL (DL 0.01)	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	29.3	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	10.0	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	21.4	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	21.1	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	BDL (DL 2)	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	70.8	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	6.7	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.43	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	6.4	45 max
15.	Iron as Fe	IS 3025 (Pt -53) 2003	mg/L	0.20	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS 3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS 1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	<i>Escherichia coli</i>	IS 1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter;
MPN- Most Probable Number; mL-Milliliter

CONCLUSION: OPENWELL WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

Authorized Signatory
Dr K Ganesan - Laboratory and Quality Manager



**TEST REPORT**

Page 8 of 9

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	SW1 - Surface Water collected Near OMPL - Flare Area
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	06.05.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	06.05.2021
Date of Analysis start & completion	06.05.2021 & 20.05.2021
Report Date	21.05.2021
Report No	HECS/W/007/060521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	7.48	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	3.6	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as Ca CO ₃	IS 3025 (Pt -21) 1983	mg/L	71.2	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	20.1	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	47.2	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	80.3	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	5.0	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	200.8	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	34.6	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.51	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	9.1	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.22	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(R.aff 2009)	MPN/100mL	Absent	Not Detectable
18.	<i>Escherichia coli</i>	IS1622:1981(R.aff 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-NephelometricTurbidity Unit; mg/L - Milligrams per liter; NA-Not Available

CONCLUSION: SURFACE WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

Authorized Signatory

Dr K Ganesan - Laboratory and Quality Manager




TEST REPORT

Page 9 of 9

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	SW2 - Surface Water collected Near OMPL - Near Central Warehouse
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	06.05.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	06.05.2021
Date of Analysis start & completion	06.05.2021 & 20.05.2021
Report Date	21.05.2021
Report No	HECS/W/008/060521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	7.00	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	3.5	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	4.0	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	71.2	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	18.4	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	34.3	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	80.3	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	6.1	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	200.4	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	27.9	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.46	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	7.1	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.24	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	<i>Escherichia coli</i>	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per liter

CONCLUSION: SURFACE WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

Authorized Signatory

Dr K Ganesan - Laboratory and Quality Manager



**TEST REPORT**

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Noise Monitoring
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	OMPL - North, South, East and West sides
Sampling Date	13.05.2021
Report Date	17.05.2021
Report No.	HECS/N/001/130521

RESULTS

S.No.	Sampling Location	MoEFCC requirements in dB		Avg. Noise level observed in dB	
		Day	Night	Day	Night
1.	OMPL-North	75	70	71.1	62.2
2.	OMPL-South			68.4	61.5
3.	OMPL-East			69.2	60.3
4.	OMPL-West			68.7	59.4

Note: dB: Decibel

Limits: Industrial Area: Day Time -75 dB (A), Night Time -70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). Residential Area: Day Time-55 dB (A), Night Time-45 dB (A). Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).

Note: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

INFERENCE: The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986

*****End of Report *****

Authorized Signatory
Dr K Ganesan - Laboratory and Quality Manager



Certificate No. TC-5786

TEST REPORT

Page 2 of 6

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Guard Pond Pump Discharge (ETP Effluent)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	06.05.2021
Qty. of sample received	2 L in HDPE Can + 1 L amber glass bottle
Date of sample received	06.05.2021
Date of Analysis start & completion	06.05.2021 & 13.05.2021
Report Date	14.05.2021
Report No	HECS/WW/002/060521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	Permissible Limit
1.	Colour	IS 3025 (Pt 4)1983(RA 2006)	Hazen	2	All efforts should be made to remove colour and unpleasant odour as far as practicable
2.	Odour	IS 3025 (Pt 5)-1983,RA 2006	-	Agreeable	
3.	Total Suspended Solids	2540D APHA 23 rd Edn.. 2012	mg/L	5.8	100
4.	pH at 25°C	IS 3025 (Pt 11):1983(RA 2006)	-	6.46	6.0-8.5
5.	Temperature	IS 3025 (Pt 9):1983(RA:2006)	°C	30	Shall not exceed 5 degree Centigrade above the receiving water temperature
6.	Oil & Grease	IS 3025,4(Pt 39):2000 (RA 2009)	mg/L	BDL (DL 2)	5
7.	Total Residual Chlorine as Cl ₂	IS 3025 (Pt26)1986(RA 2009)	mg/L	BDL (DL 0.1)	1
8.	Ammonical Nitrogen as N	IS 3025 Pt (34)1988	mg/L	6.4	50
9.	Total Kjeldhal Nitrogen as N	IS 3025 Pt (34)1988	mg/L	32.3	100
10.	Free Ammonia as NH ₃	IS 3025 (Pt 34)1998 RA. 2003	mg/L	BDL (DL 0.02)	5
11.	BOD, 3 days at 27°C as O ₂	IS 3025 (Pt 44)1993(RA 2009)	mg/L	3.7	30
12.	COD as O ₂	IS 3025 Pt (58)2006	mg/L	22.9	125
13.	Lead as Pb	IS 3025 (Pt 47)1994(RA 2009)	mg/L	BDL (DL 0.1)	0.1
14.	Chromium (Hexavalent) as Cr ⁶⁺	IS 3025 Pt (52):2003	mg/L	0.014	0.1
15.	Total Chromium as Cr	IS 3025 (Pt52):2003 (RA 2009)	mg/L	BDL (DL 0.01)	2.0
16.	Copper as Cu	IS 3025 S,(Pt 42)1992(RA 2009)	mg/L	BDL (DL 0.05)	1.0
17.	Zinc as Zn	IS 3025 (Pt 49)1994(RA 2009)	mg/L	BDL (DL 0.1)	5.0

Authorized Laboratory
Dr K Ganesan – Laboratory and Quality





Certificate No. TC-5786

TEST REPORT

Page 3 of 6

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Guard Pond Pump Discharge (ETP Effluent)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	06.05.2021
Qty. of sample received	2 L in HDPE Can + 1 L amber glass bottle
Date of sample received	06.05.2021
Date of Analysis start & completion	06.05.2021 & 13.05.2021
Report Date	14.05.2021
Report No	HECS/WW/002/060521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	Permissible Limit
18.	Nickel as Ni	IS 3025 (Pt 54):2003 (RA 2009)	mg/L	BDL (DL 0.05)	1.0
19.	Fluoride as F ⁻	IS 3025 Pt (60):2008	mg/L	BDL (DL 0.2)	1.0
20.	Sulphide as S ²⁻	IS 3025 (Pt 29):1986 (RA 2009)	mg/L	BDL (DL 0.04)	2.0
21.	Particle Size of Suspended solids	APHA 23 rd Edition	-	Passed through 850 micron	850 micron
22.	Arsenic as As	IS 3025 (Pt 37):1988(RA 2009)	mg/L	BDL (DL 0.005)	0.2
23.	Mercury as Hg	IS 3025 (Pt 48):1994 RA 1999	mg/L	BDL (DL 0.001)	0.01
24.	Cadmium as Cd	IS 3025 (Pt 41):1991	mg/L	BDL (DL 0.01)	0.1
25.	Selenium as Se	IS 3025 (Pt 56):2003	mg/L	BDL (DL 0.005)	0.05
26.	Cyanide as CN	IS 3025 (Pt 27):1986 RA. 2009	mg/L	BDL (DL 0.01)	0.2
27.	Phenols as C ₆ H ₅ OH	IS 3025 Pt (43):1992, RA 2009	mg/L	BDL (DL 0.001)	0.35
28.	Total Iron as Fe	IS 3025 (Pt 53):2003(RA 2009)	mg/L	0.18	3
29.	Manganese	IS 3025 (Pt-59):2006	mg/L	BDL (DL 0.01)	2
30.	Total Phosphorous as P	IS 3025 (Pt 31):1988(RA 2009)	mg/L	BDL (DL 0.01)	3
31.	Nitrate	IS 3025 (Pt 34):1988 (RA 2009)	mg/L	BDL (DL 1)	20
32.	Vanadium as V	IS 3025 (Pt 56):2003	mg/L	BDL (DL 0.01)	0.1
33.	Benzo(a)pyrene	USEPA 8270C	mg/L	BDL (DL 0.0001)	0.2
34.	Benzene	USEPA 8270C	mg/L	BDL (DL 0.0001)	0.1
35.	Bioassay Test	IS 6582(Pt 2):2001	Tf	9:1	90% survival of fish after 96 hrs in 100% effluent

Note:-BDL - Below Detection Limit; D.L- Detection Limit; mg/L - Milligrams per liter

CONCLUSION: ETP OUTLET EFFLUENT WATER AS ABOVE PARAMETERS ARE WITHIN STANDARDS

End of Report

Authorized Signatory

Dr K Ganesan - Laboratory and Quality Manager



1. The report in full or part shall not be used for any promotional or publicity purpose without written consent by HECS organization. 2. Samples are not drawn by HECS unless or otherwise mentioned. 3. Unless specifically requested by customer the test items will not be retained more than 15 days from the date of issue of test report. 4. Under no circumstances lab accepts any liability or loss / damage caused by use or misuse of test report after invoicing or issue of test report. 5. The test results relate only to the test items.

HECS/Q/FMT/50



Certificate No. TC-5786

TEST REPORT

Page 5 of 6

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Guard Pond Pump Discharge (ETP Effluent)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	20.05.2021
Qty. of sample received	2 L in HDPE Can + 1 L amber glass bottle
Date of sample received	20.05.2021
Date of Analysis start & completion	20.05.2021 & 30.05.2021
Report Date	31.05.2021
Report No	HECS/WW/007/200521

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	Permissible Limit
1.	Colour	IS 3025 (Pt 4):1983(RA 2006)	Hazen	BDL (DL 1)	All efforts should be made to remove colour and unpleasant odour as far as practicable
2.	Odour	IS 3025 (Pt 5):1983,RA 2006	-	Agreeable	
3.	Total Suspended Solids	2540D APHA 23 rd Edn.. 2012	mg/L	BDL (DL 4)	100
4.	pH at 25°C	IS 3025 (Pt 11):1983(RA 2006)	-	6.85	6.0-8.5
5.	Temperature	IS 3025 (Pt 9):1983(RA:2006)	°C	30	Shall not exceed 5 degree Centigrade above the receiving water temperature
6.	Oil & Grease	IS 3025,4(Pt 39):2000 (RA 2009)	mg/L	BDL (DL 2)	5
7.	Total Residual Chlorine as Cl ₂	IS 3025 (Pt26):1986(RA 2009)	mg/L	BDL (DL 0.1)	1
8.	Ammonical Nitrogen as N	IS 3025 Pt (34):1988	mg/L	8.5	50
9.	Total Kjeldhal Nitrogen as N	IS 3025 Pt (34):1988	mg/L	28.1	100
10.	Free Ammonia as NH ₃	IS 3025 (Pt 34):1998 RA. 2003	mg/L	BDL (DL 0.02)	5
11.	BOD, 3 days at 27°C as O ₂	IS 3025 (Pt 44):1993(RA 2009)	mg/L	3.8	30
12.	COD as O ₂	IS 3025 Pt (58):2006	mg/L	7.5	125
13.	Lead as Pb	IS 3025 (Pt 47):1994(RA 2009)	mg/L	BDL (DL 0.1)	0.1
14.	Chromium (Hexavalent) as Cr ⁶⁺	IS 3025 Pt (52):2003	mg/L	BDL (DL 0.01)	0.1
15.	Total Chromium as Cr	IS 3025(Pt52):2003 (RA 2009)	mg/L	BDL (DL 0.01)	2.0
16.	Copper as Cu	IS 3025 5,(Pt 42):1992(RA 2009)	mg/L	BDL (DL 0.05)	1.0
17.	Zinc as Zn	IS 3025 (Pt 49):1994(RA 2009)	mg/L	BDL (DL 0.1)	5.0

Authorized Sign

Dr K Ganesan - Laboratory and Quality Manager



**TEST REPORT**

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Guard Pond Pump Discharge (ETP Effluent)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	20.05.2021
Qty. of sample received	2 L in HDPE Can + 1 L amber glass bottle
Date of sample received	20.05.2021
Date of Analysis start & completion	20.05.2021 & 30.05.2021
Report Date	31.05.2021
Report No	HECS/WW/007/200521

RESULTS

S.No.	Parameters Monitored	Test method followed	Units	Results	Permissible Limit
18.	Nickel as Ni	IS 3025 (Pt 54):2003 (RA 2009)	mg/L	BDL (DL 0.05)	1.0
19.	Fluoride as F-	IS 3025 Pt (60):2008	mg/L	BDL (DL 0.2)	1.0
20.	Sulphide as S ²⁻	IS 3025 (Pt 29):1986 (RA 2009)	mg/L	BDL (DL 0.04)	2.0
21.	Particle Size of Suspended Solids	APHA 23 rd Edition	-	Passed through 850 micron	850 micron
22.	Arsenic as As	IS 3025 (Pt 37):1988(RA 2009)	mg/L	BDL (DL 0.005)	0.2
23.	Mercury as Hg	IS 3025 (Pt 48):1994 RA 1999	mg/L	BDL (DL 0.001)	0.01
24.	Cadmium as Cd	IS 3025 (Pt 41):1991	mg/L	BDL (DL 0.01)	0.1
25.	Selenium as Se	IS 3025 (Pt 56):2003	mg/L	BDL (DL 0.005)	0.05
26.	Cyanide as CN	IS 3025 (Pt 27):1986 RA, 2009	mg/L	BDL (DL 0.01)	0.2
27.	Phenols as C ₆ H ₅ OH	IS 3025 Pt (43):1992, RA 2009	mg/L	BDL (DL 0.001)	0.35
28.	Total Iron as Fe	IS 3025(Pt 53):2003(RA 2009)	mg/L	0.71	3
29.	Manganese	IS 3025 (Pt-59):2006	mg/L	BDL (DL 0.01)	2
30.	Total Phosphorous as P	IS 3025(Pt 31):1988(RA 2009)	mg/L	BDL (DL 0.01)	3
31.	Nitrate	IS 3025 (Pt 34):1988 (RA 2009)	mg/L	BDL (DL 1)	20
32.	Vanadium as V	IS 3025 (Pt 56):2003	mg/L	BDL (DL 0.01)	0.1
33.	Benzo(a)pyrene	USEPA 8270C	mg/L	BDL (DL 0.0001)	0.2
34.	Benzene	USEPA 8270C	mg/L	BDL (DL 0.0001)	0.1
35.	Bioassay Test	IS 6582(Pt 2):2001	Tf	9:1	90% survival of fish after 96 hrs in 100% effluent

Note:-BDL - Below Detection Limit; D.L- Detection Limit; mg/L - Milligrams per liter

CONCLUSION: ETP OUTLET EFFLUENT WATER AS ABOVE PARAMETERS ARE WITHIN STANDARDS

End of Report

Authorized Signatory
Dr K Ganesan - Laboratory and Quality Manager



ANNEXURE - D

ANNEXURE - D

Form-1 (Rule 4)
Returns Regarding Water Consumed during the Month of May, 2021

Name and address of the Consumer	Purpose for which water consumed	Reading at the beginning of the first day of the calendar month under report	Reading at the end of the last day of the calendar month under report	Quantity of Water Consumed in Kilo Liters	If the meter was out of order, the monthly average consumption of water for the previous 3 months of the working period	Quantity of water qualifying for rebate according to the assessee	Remarks
M/s ONGC Mangalore Petrochemicals Limited, Mangalore Special Economic Zone, Permude, Mangalore -574 509	Industrial cooling, spraying in mine pits or boiler feed						
	Cooling Water	0	27780	27780			
	Boiler Feed Water	0	73152	73152			
	Fire Water	0	49048	49048			
	Domestic purpose						
	Drinking Water & Sanitation	0	5440	5440			
	Processing whereby water gets polluted and the pollutants are easily bio-degradable						
	Service Water	0	3931	3931			
Total Consumption				1,59,351			

Signature of the Consumer

Name

Address


 Shrivardhan K. Sr. Manager (Env)

M/s ONGC Mangalore Petrochemicals Limited, Mangalore Special Economic Zone, Permude, Mangalore -574 509

ONGC Mangalore Petrochemicals Limited

Production Details for May, 2021

Net Naptha Processed – 80,042 MT

Sl. No.	Name of the Product	Quantity, MT
1	Paraxylene (Product)	29,072
2	Benzene (Co product)	8,220





(भारत सरकार का एक उद्यम)
(A Government of India Enterprise)

ओएनजीसी मंगलूर पेट्रोकेमिकल्स लिमिटेड

ONGC Mangalore Petrochemicals Limited

(A Subsidiary of Mangalore Refinery and Petrochemicals Limited)

एमएसईजेड परेमुदे, मंगलूर - ५७४ ५०९, MSEZ, Permude, Mangaluru - 574 509.

CIN : U40107KA2006GOI041258 दूरभाष Tel: 0824-2872000, फैक्स Fax: 0824-2872016. Website: www.ompl.co.in

REF: OMPL/PCB/SP/2021-22/

Date: 15/12/2021

To:
The Environmental Officer
Regional Office
KSPCB
Baikampady, Mangalore-11

Mangalore SEZ Ltd. 2095
Documents & Contents subject to verification
Received date 20.12.2021
Received by V. Bhat

Dear Sir,

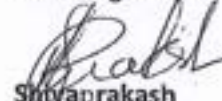
Sub: Submission of Environmental Monitoring Report for the Month of November, 2021



Ref: KSPCB Combined Consent Order No. AW-301949 dated 27th January, 2017

With respect to the above subject; we are herewith submitting the following Environmental Monitoring Reports and Production Report for the Month of November, 2021 respectively, enclosed herewith.

1. Ambient Air Quality Monitoring at 5 different locations in and around OMPL, enclosed as Annexure-A
2. Water Analysis Reports at 9 different locations in and around OMPL, as Annexure-B
3. Noise Level Monitoring Report at OMPL, as Annexure-C
4. Treated Effluent Analysis Report, Annexure-D
5. Returns Regarding Water Consumed, for the Month of November, 2021, as Annexure-E
6. Production Report as Annexure-F

Thanking You,


Shivaprakash
Sr. Manager- Env


Vinay Kumar
For Production

24/12/2021

CC: Member Secretary, KSPCB, Bangalore
CC: Head (Technical), MSEZ
CC: CEO, OMPL for info
CC: DGM- Production for info

Hubert Enviro Care Systems (P) Ltd.

H.O.: # 18, 92nd Street, Ashok Nagar, Chennai - 600 083.
Ph: 42983555 Fax : 42985500 E-mail : labsales@hecs.in

C-45, Industrial Estate, Baikampady, Mangalore, Karnataka - 575011.
Ph: 0824 - 2408111, Email: kro@hecs.in, Website: www.hecs.in



Annexure - A

Laboratory Services Division

(Chemical & Biological Testing)
Recognized by MoEF, BIS
FSSAI Notified Laboratory
ISO 9001, 14001 & OHSAS 18001 Certified.

TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Ambient Air Quality Monitoring (AAQ)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	OMPL - East Side
Report Date	05.12.2021
Report No	HECS/AA/001-009/051221

RESULTS

November 2021 - Week		45-Week		46-Week		47-Week		48-Week		49-Week	Avg. Value
Parameters	NAAQ	01.11.21	05.11.21	08.11.21	11.11.21	15.11.21	18.11.21	22.11.21	25.11.21	29.11.21	
PM _{2.5} (µg/m ³)	60*	17.2	17.5	17.6	17.4	17.8	17.3	17.5	17.7	17.3	17.5
PM ₁₀ (µg/m ³)	100*	34.6	35.1	35.6	35.3	35.8	35.4	35.7	35.2	35.9	35.4
SO ₂ (µg/m ³)	80*	7.6	7.8	8.0	8.1	7.7	7.9	7.6	7.4	7.5	7.7
NO ₂ (µg/m ³)	80*	8.2	8.4	8.9	9.2	8.6	8.8	9.4	9.1	8.7	8.8
CO (mg/m ³)	2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
O ₃ (µg/m ³)	100**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NH ₃ (µg/m ³)	400*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (µg/m ³)	1*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As (ng/m ³)	6***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni (ng/m ³)	20***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene (µg/m ³)	5***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B(a)P (ng/m ³)	1***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: * : 24 hours average; ** : 8 hours average; *** : Annual average

Test Methods Followed:

PM₁₀ : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)
PM_{2.5} : IS 5182 (Pt 24): 2019 (Gravimetric)
SO₂ : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)
NO₂ : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)
O₃ : IS 5182 (Pt 9): 1974
NH₃ : IS 5182 (Pt 25): 2019
CO : IS 5182 (Pt 10): 1999 (RA 2013)
Pb, As, Ni : In-house method based on CPCB guidelines vol. I (2011)
C₆H₆ : GC FID/ GC MS based on IS: 5182 (Pt 11) based on CPCB guidelines vol. I (2011)
B(a)P : In-house validated method based on CPCB guidelines vol. I (2011)

BDL =Below detection limit; DL - Detection Limit; PM_{2.5}-Particulate matter size less than 2.5 Micron, PM₁₀-Particulate matter size less than 10 Micron; SO₂ Sulphur dioxide; NO₂ - Nitrogen-di-oxide; CO - Carbon Mono Oxide (DL 0.1 mg/m³); O₃-Ozone (DL 10 µg/m³); NH₃-Ammonia (DL 5 µg/m³); Pb-Lead (DL 0.05 µg/m³); As-Arsenic (DL 0.1 ng/m³); Ni-Nickel (DL 0.5 ng/m³); Benzene (DL 1 µg/m³); B(a)P- Benzo-α-pyrene (DL 0.1 ng/m³); ng/m³: nanogram per cubic meter; µg/m³ - microgram per cubic meter.

CONCLUSION: ANALYSED PARAMETERS MEET THE NAAQ STANDARDS

*****End of Report*****

Laboratory and Quality Manager - Authorized Signatory


(Dr K GANESAN)

Hubert Enviro Care Systems (P) Ltd.

H.O.: # 18, 92nd Street, Ashok Nagar, Chennai - 600 083.
Ph: 42985555 Fax : 42985500 E-mail : labsales@hecs.in

C-45, Industrial Estate, Baikampady, Mangalore, Karnataka - 575011.
Ph: 0824 - 2408111, Email: kro@hecs.in, Website: www.hecs.in



Laboratory Services Division

(Chemical & Biological Testing)
Recognized by MoEF, BIS
FSSAI Notified Laboratory
ISO 9001, 14001 & OHSAS 18001 Certified.

TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Ambient Air Quality Monitoring (AAQ)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	Shantigudda
Report Date	05.12.2021
Report No	HECS/AA/010-018/051221

RESULTS

November 2021- Week		45-Week		46-Week		47-Week		48-Week		49-Week	Avg-Value
Parameters	NAAQ	01.11.21	05.11.21	08.11.21	11.11.21	15.11.21	18.11.21	22.11.21	25.11.21	29.11.21	
PM _{2.5} (µg/m ³)	60*	19.8	19.7	20.2	20.9	20.7	20.1	20.8	19.9	20.9	20.3
PM ₁₀ (µg/m ³)	100*	38.6	38.1	38.7	38.3	38.7	37.9	38.2	38.6	38.9	38.4
SO ₂ (µg/m ³)	80*	8.2	8.5	8.4	8.8	8.2	8.6	8.3	8.5	8.2	8.4
NO ₂ (µg/m ³)	80*	9.5	9.6	9.8	9.9	10.2	10.3	10.4	10.6	10.5	10.1
CO (mg/m ³)	2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
O ₃ (µg/m ³)	100**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NH ₃ (µg/m ³)	400*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (µg/m ³)	1*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As (ng/m ³)	6***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni (ng/m ³)	20***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene (µg/m ³)	5***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B(a)P (ng/m ³)	1***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: * 24 hours average; ** 8 hours average; *** Annual average

Test Methods Followed:

- PM₁₀ : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)
PM_{2.5} : IS 5182 (Pt 24): 2019 (Gravimetric)
SO₂ : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)
NO₂ : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)
O₃ : IS 5182 (Pt 9): 1974
NH₃ : IS 5182 (Pt 25): 2019
CO : IS 5182 (Pt 10): 1999 (RA 2013)
Pb, As, Ni : In-house method based on CPCB guidelines vol. I (2011)
C₆H₆ : GC FID/ GC MS based on IS: 5182 (Pt 11) based on CPCB guidelines vol. I (2011)
B(a)P : In-house validated method based on CPCB guidelines vol. I (2011)

BDL =Below detection limit; DL - Detection Limit; PM_{2.5}-Particulate matter size less than 2.5 Micron, PM₁₀-Particulate matter size less than 10 Micron; SO₂ Sulphur dioxide; NO₂ - Nitrogen-di-oxide; CO - Carbon Mono Oxide(DL 0.1 mg/m³); O₃-Ozone(DL 10 µg/m³); NH₃-Ammonia (DL 5 µg/m³); Pb-Lead (DL 0.05 µg/m³); As-Arsenic (DL 0.1 ng/m³); Ni-Nickel (DL 0.5 ng/m³); Benzene-(DL 1 µg/m³); B(a)P- Benzo -a-pyrene(DL 0.1 ng/m³); ng/m³: nanogram per cubic meter; µg/m³ - microgram per cubic meter.

CONCLUSION: ANALYSED PARAMETERS MEET THE NAAQ STANDARDS

*****End of Report *****

Laboratory and Quality Manager - Authorized Signatory

(Dr K GANESAN)

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TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Ambient Air Quality Monitoring (AAQ)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	Tenka Ekkar
Report Date	05.12.2021
Report No	HECS/AA/019-027/051221

RESULTS

November 2021 - Week		45-Week		46-Week		47-Week		48-Week		49-Week	Avg-Value
Parameters	NAAQ	01.11.21	05.11.21	08.11.21	11.11.21	15.11.21	18.11.21	22.11.21	25.11.21	29.11.21	
PM _{2.5} (µg/m ³)	60*	15.2	15.3	15.1	15.4	15.6	15.5	15.2	15.4	15.5	15.4
PM ₁₀ (µg/m ³)	100*	34.2	34.4	34.3	34.1	34.5	34.6	34.7	34.2	34.9	34.4
SO ₂ (µg/m ³)	80*	8.1	8.3	8.4	8.2	8.6	8.5	8.9	8.8	8.7	8.5
NO ₂ (µg/m ³)	80*	9.5	9.7	9.8	9.3	9.4	9.5	9.6	10.1	9.9	9.6
CO (mg/m ³)	2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
O ₃ (µg/m ³)	100**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NH ₃ (µg/m ³)	400*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (µg/m ³)	1*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As (ng/m ³)	6***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni (ng/m ³)	20***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene (µg/m ³)	5***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B(a)P (ng/m ³)	1***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: * 24 hours average; ** 8 hours average; *** Annual average

Test Methods Followed:

PM₁₀ : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)
PM_{2.5} : IS 5182 (Pt 24): 2019 (Gravimetric)
SO₂ : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)
NO₂ : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)
O₃ : IS 5182 (Pt 9): 1974
NH₃ : IS 5182 (Pt 25): 2019
CO : IS 5182 (Pt 10): 1999 (RA 2013)
Pb, As, Ni : In-house method based on CPCB guidelines vol. I (2011)
C₆H₆ : GC FID/ GC MS based on IS: 5182 (Pt 11) based on CPCB guidelines vol. I (2011)
B(a)P : In-house validated method based on CPCB guidelines vol. I (2011)

BDL =Below detection limit; DL - Detection Limit; PM_{2.5}-Particulate matter size less than 2.5 Micron, PM₁₀-Particulate matter size less than 10 Micron; SO₂ Sulphur dioxide; NO₂ - Nitrogen-di-oxide; CO - Carbon Mono Oxide(DL 0.1 mg/m³); O₃-Ozone(DL 10 µg/m³); NH₃-Ammonia (DL 5 µg/m³); Pb-Lead (DL 0.05 µg/m³); As-Arsenic (DL 0.1 ng/m³); Ni-Nickel (DL 0.5 ng/m³); Benzene-(DL 1 µg/m³); B(a)P- Benzo -α-pyrene(DL 0.1 ng/m³); ng/m³: nanogram per cubic meter; µg/m³ - microgram per cubic meter.

CONCLUSION: ANALYSED PARAMETERS MEET THE NAAQ STANDARDS

*****End of Report *****

(D/K GANESAN)

Laboratory and Quality Manager - Authorized Signatory

1. The report in full or part shall not be used for any promotional or publicity purpose without written consent by HECS organization. 2. Samples are not drawn by HECS unless or otherwise mentioned. 3. Unless specifically requested by customer the test items will not be retained more than 15 days from the date of issue of test report. 4. Under no circumstances lab accepts any liability or loss / damage caused by use or misuse of test report after invoicing or issue of test report. 5. The test results relate only to the test items.

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TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Ambient Air Quality Monitoring (AAQ)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	Permude Village
Report Date	05.12.2021
Report No	HECS/AA/028-036/051221

RESULTS

November 2021- Week		45-Week		46-Week		47-Week		48-Week		49-Week	Avg. Value
Parameters	NAAQS	01.11.21	05.11.21	08.11.21	11.11.21	15.11.21	18.11.21	22.11.21	25.11.21	29.11.21	
PM _{2.5} (µg/m ³)	60*	16.5	16.8	16.9	16.4	16.7	16.8	16.3	16.2	16.3	16.5
PM ₁₀ (µg/m ³)	100*	34.6	34.9	34.3	34.4	34.7	34.8	34.5	34.8	34.6	34.6
SO ₂ (µg/m ³)	80*	8.4	8.2	8.5	8.7	8.6	8.4	8.5	8.7	8.9	8.5
NO ₂ (µg/m ³)	80*	9.6	9.7	9.6	9.3	9.6	9.8	9.4	9.3	9.5	9.5
CO (mg/m ³)	2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
O ₃ (µg/m ³)	100**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NH ₃ (µg/m ³)	400*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (µg/m ³)	1*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As (ng/m ³)	6***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni (ng/m ³)	20***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene (µg/m ³)	5***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B(a)P (ng/m ³)	1***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: * 24 hours average; ** 8 hours average; *** Annual average

Test Methods Followed:

PM₁₀ : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)
PM_{2.5} : IS 5182 (Pt 24): 2019 (Gravimetric)
SO₂ : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)
NO₂ : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)
O₃ : IS 5182 (Pt 9): 1974
NH₃ : IS 5182 (Pt 25): 2019
CO : IS 5182 (Pt 10): 1999 (RA 2013)
Pb, As, Ni : In-house method based on CPCB guidelines vol. I (2011)
C₆H₆ : GC FID/ GC MS based on IS: 5182 (Pt 11) based on CPCB guidelines vol. I (2011)
B(a)P : In-house validated method based on CPCB guidelines vol. I (2011)

BDL =Below detection limit; DL - Detection Limit; PM_{2.5}-Particulate matter size less than 2.5 Micron, PM₁₀-Particulate matter size less than 10 Micron; SO₂ Sulphur dioxide; NO₂ - Nitrogen-di-oxide; CO - Carbon Mono Oxide(DL 0.1 mg/m³); O₃-Ozone(DL 10 µg/m³); NH₃-Ammonia (DL 5 µg/m³); Pb-Lead (DL 0.05 µg/m³); As-Arsenic (DL 0.1 ng/m³); Ni-Nickel (DL 0.5 ng/m³); Benzene-(DL 1 µg/m³); B(a)P- Benzo -α-pyrene(DL 0.1 ng/m³); ng/m³: nanogram per cubic meter; µg/m³ - microgram per cubic meter.

CONCLUSION: ANALYSED PARAMETERS MEET THE NAAQ STANDARDS

*****End of Report*****

(Dr K GANESAN)

Laboratory and Quality Manager - Authorized Signatory

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TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Ambient Air Quality Monitoring (AAQ)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	OMPL - West Side
Report Date	05.12.2021
Report No	HECS/AA/037-045/051221

RESULTS

November 2021- Week		45-Week		46-Week		47-Week		48-Week		49-Week	Avg. Value
Parameters	NAAQ	01.11.21	05.11.21	08.11.21	11.11.21	15.11.21	18.11.21	22.11.21	25.11.21	29.11.21	
PM _{2.5} (µg/m ³)	60*	18.4	18.8	18.7	19.1	18.6	18.9	18.5	18.4	18.7	18.7
PM ₁₀ (µg/m ³)	100*	36.5	36.3	36.7	36.2	36.8	36.4	36.5	37.1	37.3	36.6
SO ₂ (µg/m ³)	80*	8.4	8.6	8.8	8.7	8.9	8.3	9.0	8.5	8.2	8.6
NO ₂ (µg/m ³)	80*	9.6	9.5	9.3	9.4	9.6	9.7	9.2	9.3	9.5	9.5
CO (mg/m ³)	2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
O ₃ (µg/m ³)	100**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
NH ₃ (µg/m ³)	400*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pb (µg/m ³)	1*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
As (ng/m ³)	6***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ni (ng/m ³)	20***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzene (µg/m ³)	5***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
B(a)P (ng/m ³)	1***	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: * : 24 hours average; ** : 8 hours average; *** : Annual average

Test Methods Followed:

PM₁₀ : IS 5182 (Pt 23): 2006 (RA 2017) (Gravimetric)
PM_{2.5} : IS 5182 (Pt 24): 2019 (Gravimetric)
SO₂ : IS 5182 (Pt 2): 2001 (RA 2017) (Improved wet and Geake method)
NO₂ : IS 5182 (Pt 6): 2006 (RA 2017) (Jacob and Hochheiser modified method)
O₃ : IS 5182 (Pt 9): 1974
NH₃ : IS 5182 (Pt 25): 2019
CO : IS 5182 (Pt 10): 1999 (RA 2013)
Pb, As, Ni : In-house method based on CPCB guidelines vol. I (2011)
C₆H₆ : GC FID/ GC MS based on IS: 5182 (Pt 11) based on CPCB guidelines vol. I (2011)
B(a)P : In-house validated method based on CPCB guidelines vol. I (2011)

BDL =Below detection limit; DL - Detection Limit; PM_{2.5}-Particulate matter size less than 2.5 Micron, PM₁₀-Particulate matter size less than 10 Micron; SO₂ Sulphur dioxide; NO₂ - Nitrogen-di-oxide; CO - Carbon Mono Oxide(DL 0.1 mg/m³); O₃-Ozone(DL 10 µg/m³); NH₃-Ammonia (DL 5 µg/m³); Pb-Lead (DL 0.05 µg/m³); As-Arsenic (DL 0.1 ng/m³); Ni-Nickel (DL 0.5 ng/m³); Benzene-(DL 1 µg/m³); B(a)P- Benzo -α-pyrene(DL 0.1 ng/m³); ng/m³: nanogram per cubic meter; µg/m³ - microgram per cubic meter.

CONCLUSION: ANALYSED PARAMETERS MEET THE NAAQ STANDARDS

*****End of Report*****

Laboratory and Quality Manager - Authorized Signatory

(Dr K GANESAN)

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TEST REPORT

Page 1 of 1

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	GW1 - Ground Water collected from Narayana Guru Community Hall, Permude
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	01.11.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	01.11.2021
Date of Analysis start & completion	01.11.2021 & 10.11.2021
Report Date	11.11.2021
Report No	HECS/W/015/011121

RESULTS

S.No.	Parametersmonitored	Test method followed	Units	Results	IS 10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.74	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	BDL (DL 0.1)	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	29.0	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	10.0	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	28.6	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	14.6	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	BDL (DL 2)	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	67.2	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	BDL (DL 5)	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.5	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	6.3	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.22	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	Escherichia coli	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter; MPN- Most Probable Number; mL-Milliliter

CONCLUSION: GROUND WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500: 2012

End of Report


Authorized Signatory
Dr K Ganesan - Laboratory and Quality Manager

Hubert Enviro Care Systems (P) Ltd.

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TEST REPORT

Page 1 of 1

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	GW2 - Ground Water collected from Gagnet Labour Colony
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	01.11.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	01.11.2021
Date of Analysis start & completion	01.11.2021 & 10.11.2021
Report Date	11.11.2021
Report No	HECS/W/016/011121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	IS 10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.83	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	BDL (DL 0.1)	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	37.3	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	8.3	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	34.3	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	16.7	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	4.0	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	68.0	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	BDL (DL 5)	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.39	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	7.2	45 max
15.	Iron as Fe	IS 3025 (Pt -53) 2003	mg/L	0.21	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS 3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS 1622 1981 (RA 2009)	MPN/100mL	Absent	Not Detectable
18.	<i>Escherichia coli</i>	IS 1622 1981 (RA 2009)	Per 100mL	Absent	Not Detectable

Note: BDL - Below Detection Limit; D.L - Detection Limit; NTU - Nephelometric Turbidity Unit; mg/L - Milligrams per Liter; MPN - Most Probable Number; mL - Milliliter

CONCLUSION: GROUND WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

Authorized Signatory
Dr K Ganesan - Laboratory and Quality Manager

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TEST REPORT

Page 1 of 1

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	GW3 - Ground Water collected from L & T New Labour Colony
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	01.11.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	01.11.2021
Date of Analysis start & completion	01.11.2021 & 10.11.2021
Report Date	11.11.2021
Report No	HECS/W/017/011121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.80	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	BDL (DL 0.1)	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	33.2	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	8.3	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	40.0	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	16.7	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	3.0	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	67.6	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	BDL (DL 5)	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	BDL (DL 0.2)	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	5.4	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.20	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	<i>Escherichia coli</i>	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter; MPN- Most Probable Number; mL-Milliliter

CONCLUSION: GROUND WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

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TEST REPORT

Page 1 of 1

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	GW4 - Ground Water collected Near OMPL - ETP
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	08.11.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	08.11.2021
Date of Analysis start & completion	08.11.2021 & 17.11.2021
Report Date	18.11.2021
Report No	HECS/W/006/081121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.83	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	3.0	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	3.6	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	49.8	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	11.6	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	45.7	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	20.9	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	5.0	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	80.8	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	7.1	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.36	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	5.2	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.17	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	Escherichia coli	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:- BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter; MPN- Most Probable Number; mL-Milliliter

CONCLUSION: GROUND WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

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TEST REPORT

Page 1 of 1

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	OW1 - Open Well Water collected from TenkaEkkar
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	01.11.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	01.11.2021
Date of Analysis start & completion	01.11.2021 & 10.11.2021
Report Date	11.11.2021
Report No	HECS/W/018/011121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.79	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	BDL (DL 0.1)	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	37.3	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	10.0	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	34.3	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	18.8	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	3.0	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	67.6	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	BDL (DL 5)	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.35	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	4.7	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.21	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	Escherichia coli	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter; MPN- Most Probable Number; mL-Milliliter

CONCLUSION: OPENWELL WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

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TEST REPORT

Page 1 of 1

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	OW2 - Open Well Water collected from Shantigudda Village
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	01.11.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	01.11.2021
Date of Analysis start & completion	01.11.2021 & 10.11.2021
Report Date	11.11.2021
Report No	HECS/W/019/011121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.72	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	BDL (DL 0.1)	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	41.5	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	10.0	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	40.0	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	16.7	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	4.0	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	67.2	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	BDL (DL 5)	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.33	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	6.8	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.14	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	<i>Escherichia coli</i>	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter; MPN- Most Probable Number; mL-Milliliter

CONCLUSION: OPENWELL WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

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TEST REPORT

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Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	OW3 - Open Well Water collected from Premude Village
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	01.11.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	01.11.2021
Date of Analysis start & completion	01.11.2021 & 10.11.2021
Report Date	11.11.2021
Report No	HECS/W/020/011121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.70	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	BDL (DL 0.1)	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	33.2	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	11.6	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	34.3	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	20.9	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	BDL (DL 2)	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	67.2	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	BDL (DL 5)	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.35	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	4.9	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.23	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	Escherichia coli	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per Liter; MPN- Most Probable Number; mL-Milliliter

CONCLUSION: OPENWELL WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

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TEST REPORT

Page 1 of 1

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premiude Village, Mangalore - 574509
Sample Description	SW1 - Surface Water collected Near OMPL - Flare Area
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	08.11.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	08.11.2021
Date of Analysis start & completion	08.11.2021 & 17.11.2021
Report Date	18.11.2021
Report No	HECS/W/007/081121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.66	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	0.6	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as Ca CO ₃	IS 3025 (Pt -21) 1983	mg/L	66.4	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	23.3	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	51.4	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	52.3	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	2.0	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	170.4	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	13.5	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.28	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	6.8	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.24	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(R.aff 2009)	MPN/100mL	Absent	Not Detectable
18.	Escherichia coli	IS1622:1981(R.aff 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-NephelometricTurbidity Unit; mg/L - Milligrams per liter; NA-Not Available

CONCLUSION: SURFACE WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

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TEST REPORT

Page 1 of 1

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	SW2 - Surface Water collected Near OMPL - Near Central Warehouse
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	08.11.2021
Qty. of sample received	2 L in HDPE Can + 100 sterile container
Date of sample received	08.11.2021
Date of Analysis start & completion	08.11.2021 & 17.11.2021
Report Date	18.11.2021
Report No	HECS/W/008/081121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	As per IS10500:2012 Permissible Limit
1.	pH at 25°C	IS 3025 (Pt -11) 1983	-	6.73	6.5-8.5
2.	Colour	IS 3025 (Pt -4) 1983	Hazen	BDL (DL 1)	15
3.	Turbidity	IS 3025 (Pt -10) 1984	NTU	0.7	5 max
4.	Odour	IS 3025 (Pt -5) 1983	-	Agreeable	Agreeable
5.	Taste	IS 3025 (Pt -8) 1984	-	Agreeable	Agreeable
6.	Total Hardness as CaCO ₃	IS 3025 (Pt -21) 1983	mg/L	78.8	600 max
7.	Calcium as Ca	IS 3025 (Pt -40) 1991	mg/L	24.9	200 max
8.	Total Alkalinity as CaCO ₃	IS 3025 (Pt -23) 1986	mg/L	45.7	200 max
9.	Chloride as Cl	IS 3025 (Pt -32) 1988	mg/L	52.3	1000 max
10.	Magnesium as Mg	IS 3025 (Pt -46) 1994	mg/L	4.0	100 max
11.	Total Dissolved Solids	IS 3025 (Pt -16) 1984	mg/L	170.8	2000 max
12.	Sulphate as SO ₄	IS 3025 (Pt -24) 1986	mg/L	14.4	400 max
13.	Fluoride	IS 3025 (Pt -60) 2008	mg/L	0.30	1.5 max
14.	Nitrate as NO ₃	ASTM (Pt -31) 1978	mg/L	5.8	45 max
15.	Iron as Fe	IS3025 (Pt -53) 2003	mg/L	0.22	0.3 max
16.	Hexavalent Chromium Cr ⁶⁺	IS3025 (Pt -52) 2003	mg/L	BDL (DL 0.01)	0.05 max
17.	Total coli form Bacteria	IS1622:1981(RA 2009)	MPN/100mL	Absent	Not Detectable
18.	Escherichia coli	IS1622:1981(RA 2009)	Per 100mL	Absent	Not Detectable

Note:-BDL - Below Detection Limit; D.L- Detection Limit; NTU-Nephelometric Turbidity Unit; mg/L - Milligrams per liter

CONCLUSION: SURFACE WATER AS ABOVE PARAMETERS MEETS DRINKING WATER GUIDELINES OF IS 10500:2012

End of Report

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TEST REPORT

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Noise Monitoring
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Sampling Location	OMPL - North, South, East and West sides
Sampling Date	11.11.2021
Report Date	13.11.2021
Report No.	HECS/N/001/111121

RESULTS

S.No.	Sampling Location	MoEFCC requirements in dB		Avg. Noise level observed in dB	
		Day	Night	Day	Night
1.	OMPL-North	75	70	71.1	62.6
2.	OMPL-South			69.2	61.8
3.	OMPL-East			69.8	61.1
4.	OMPL-West			67.7	59.2


Note: dB: Decibel

Limits: Industrial Area: Day Time -75 dB (A), Night Time -70 dB (A). Commercial Area: Day Time-65 dB (A), Night Time-55 dB (A). Residential Area: Day Time-55 dB (A), Night Time-45 dB (A). Silence Zone: Day Time-50 dB (A), Night Time-40 dB (A).

Note: Leq- Equivalent Noise Level (hourly); Reference: The Noise Pollution (Regulation and Control) Rules, 2000, CPCB, New Delhi

INFERENCE: The observed noise levels are within the limits as per The Noise Pollution (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986

*****End of Report*****


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Page 1 of 2

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Guard Pond Pump Discharge (ETP Effluent)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	08.11.2021
Qty. of sample received	2 L in HDPE Can + 1 L amber glass bottle
Date of sample received	08.11.2021
Date of Analysis start & completion	08.11.2021 & 19.11.2021
Report Date	20.11.2021
Report No	HECS/WW/002/081121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	Permissible Limit
1.	Colour	IS 3025 (Pt 4):1983(RA 2006)	Hazen	BDL (DL 1)	All efforts should be made to remove colour and unpleasant odour as far as practicable
2.	Odour	IS 3025 (Pt 5):1983,RA 2006	-	Agreeable	
3.	Total Suspended Solids	2540D APHA 23 rd Edn.. 2012	mg/L	BDL (DL 4)	100
4.	pH at 25°C	IS 3025 (Pt 11):1983(RA 2006)	-	7.00	6.0-8.5
5.	Temperature	IS 3025 (Pt 9):1983(RA:2006)	°C	28	Shall not exceed 5 degree Centigrade above the receiving water temperature
6.	Oil & Grease	IS 3025,4(Pt 39):2000 (RA 2009)	mg/L	2.5	5
7.	Total Residual Chlorine as Cl ₂	IS 3025 (Pt26):1986(RA 2009)	mg/L	BDL (DL 0.1)	1
8.	Ammonical Nitrogen as N	IS 3025 Pt (34):1988	mg/L	5.8	50
9.	Total Kjeldhal Nitrogen as N	IS 3025 Pt (34):1988	mg/L	23.4	100
10.	Free Ammonia as NH ₃	IS 3025 (Pt 34):1998 RA. 2003	mg/L	BDL (DL 0.02)	5
11.	BOD, 3 days at 27°C as O ₂	IS 3025 (Pt 44):1993(RA 2009)	mg/L	3.8	30
12.	COD as O ₂	IS 3025 Pt (58):2006	mg/L	24.8	125
13.	Lead as Pb	IS 3025 (Pt 47):1994(RA 2009)	mg/L	BDL (DL 0.1)	0.1
14.	Chromium (Hexavalent) as Cr ⁶⁺	IS 3025 Pt (52):2003	mg/L	BDL (DL 0.01)	0.1
15.	Total Chromium as Cr	IS 3025 (Pt52):2003 (RA 2009)	mg/L	BDL (DL 0.01)	2.0
16.	Copper as Cu	IS 3025 5,(Pt 42):1992(RA 2009)	mg/L	BDL (DL 0.05)	1.0
17.	Zinc as Zn	IS 3025 (Pt 49):1994(RA 2009)	mg/L	BDL (DL 0.1)	5.0

Authorized Signatory

Dr K Ganesan – Laboratory and Quality Manager

Hubert Enviro Care Systems (P) Ltd.

H.O.: # 18, 92nd Street, Ashok Nagar, Chennai - 600 083.
Ph: 42985555 Fax : 42985500 E-mail : labsales@hecs.in

C-45, Industrial Estate, Balkampady, Mangalore, Karnataka - 575011.
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Laboratory Services Division

(Chemical & Biological Testing)
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ISO 9001, 14001 & OHSAS 18001 Certified.

TEST REPORT

Page 2 of 2

Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Guard Pond Pump Discharge (ETP Effluent)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	08.11.2021
Qty. of sample received	2 L in HDPE Can + 1 L amber glass bottle
Date of sample received	08.11.2021
Date of Analysis start & completion	08.11.2021 & 19.11.2021
Report Date	20.11.2021
Report No	HECS/WW/002/081121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	Permissible Limit
18.	Nickel as Ni	IS 3025 (Pt 54):2003 (RA 2009)	mg/L	BDL (DL 0.05)	1.0
19.	Fluoride as F-	IS 3025 Pt (60):2008	mg/L	BDL (DL 0.2)	1.0
20.	Sulphide as S ²⁻	IS 3025 (Pt 29):1986 (RA 2009)	mg/L	BDL (DL 0.04)	2.0
21.	Particle Size of Suspended solids	APHA 23 rd Edition		Passed through 850 micron	850 micron
22.	Arsenic as As	IS 3025 (Pt 37):1988(RA 2009)	mg/L	BDL (DL 0.005)	0.2
23.	Mercury as Hg	IS 3025 (Pt 48):1994 RA 1999	mg/L	BDL (DL 0.001)	0.01
24.	Cadmium as Cd	IS 3025 (Pt 41):1991	mg/L	BDL (DL 0.01)	0.1
25.	Selenium as Se	IS 3025 (Pt 56):2003	mg/L	BDL (DL 0.005)	0.05
26.	Cyanide as CN	IS 3025 (Pt 27):1986 RA. 2009	mg/L	BDL (DL 0.01)	0.2
27.	Phenols as C ₆ H ₅ OH	IS 3025 Pt (43):1992,RA 2009	mg/L	BDL (DL 0.001)	0.35
28.	Total Iron as Fe	IS 3025 (Pt 53):2003(RA 2009)	mg/L	0.49	3
29.	Manganese	IS 3025 (Pt-59):2006	mg/L	BDL (DL 0.01)	2
30.	Total Phosphorous as P	IS 3025 (Pt 31):1988(RA 2009)	mg/L	BDL (DL 0.01)	3
31.	Nitrate	IS 3025 (Pt 34):1988 (RA 2009)	mg/L	BDL (DL 1)	20
32.	Vanadium as V	IS 3025 (Pt 56):2003	mg/L	BDL (DL 0.01)	0.1
33.	Benzo(a)pyrene	USEPA 8270C	mg/L	BDL (DL 0.0001)	0.2
34.	Benzene	USEPA 8270C	mg/L	BDL (DL 0.0001)	0.1
35.	Bioassay Test	IS 6582(Pt 2):2001	Tf	9:1	90% survival of fish after 96 hrs in 100% effluent

Note:-BDL - Below Detection Limit; D.L- Detection Limit; mg/L - Milligrams per liter

CONCLUSION: ETP OUTLET EFFULENTWATER AS ABOVE PARAMETERSARE WITHIN STANDARDS

End of Report


Authorized Signatory
Dr K Ganesan - Laboratory and Quality Manager

1. The report in full or part shall not be used for any promotional or publicity purpose without written consent by HECS organization. 2. Samples are not drawn by HECS unless or otherwise mentioned. 3. Unless specifically requested by customer the test items will not be retained more than 15 days from the date of issue of test report. 4. Under no circumstances lab accepts any liability or loss / damage caused by use or misuse of test report after invoicing or issue of test report. 5. The test results relate only to the test items.

HECS/Q/FMT/50

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TEST REPORT

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Name of the Industry	M/s. ONGC Mangalore Petrochemicals Limited (OMPL)
Address of the Industry	Mangalore SEZ, Premude Village, Mangalore - 574509
Sample Description	Guard Pond Pump Discharge (ETP Effluent)
Sample Collected by	M/s. Hubert Enviro Care Systems (P) Ltd.,
Date of Sampling	24.11.2021
Qty. of sample received	2 L in HDPE Can + 1 L amber glass bottle
Date of sample received	24.11.2021
Date of Analysis start & completion	24.11.2021 & 01.12.2021
Report Date	02.12.2021
Report No	HECS/WW/003/241121

RESULTS

S.No.	Parameters monitored	Test method followed	Units	Results	Permissible Limit
1.	Colour	IS 3025 (Pt 4)1983(RA 2006)	Hazen	BDL (DL 1)	All efforts should be made to remove colour and unpleasant odour as far as practicable
2.	Odour	IS 3025 (Pt 5)-1983,RA 2006	-	Agreeable	
3.	Total Suspended Solids	2540D APHA 23 rd Edn.. 2012	mg/L	BDL (DL 4)	100
4.	pH at 25°C	IS 3025 (Pt 11):1983(RA 2006)	-	6.42	6.0-8.5
5.	Temperature	IS 3025 (Pt 9):1983(RA:2006)	°C	28	Shall not exceed 5 degree Centigrade above the receiving water temperature
6.	Oil & Grease	IS 3025,4(Pt 39):2000 (RA 2009)	mg/L	2.3	5
7.	Total Residual Chlorine as Cl ₂	IS 3025 (Pt26)1986(RA 2009)	mg/L	BDL (DL 0.1)	1
8.	Ammonical Nitrogen as N	IS 3025 Pt (34)1988	mg/L	5.2	50
9.	Total Kjeldhal Nitrogen as N	IS 3025 Pt (34)1988	mg/L	21.4	100
10.	Free Ammonia as NH ₃	IS 3025 (Pt 34)1998 RA. 2003	mg/L	BDL (DL 0.02)	5
11.	BOD, 3 days at 27°C as O ₂	IS 3025 (Pt 44)1993(RA 2009)	mg/L	3.9	30
12.	COD as O ₂	IS 3025 Pt (58)2006	mg/L	24.6	125
13.	Lead as Pb	IS 3025 (Pt 47)1994(RA 2009)	mg/L	BDL (DL 0.1)	0.1
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TEST REPORT

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25.	Selenium as Se	IS 3025 (Pt 56)2003	mg/L	BDL (DL 0.005)	0.05
26.	Cyanide as CN	IS 3025 (Pt 27)1986 RA. 2009	mg/L	BDL (DL 0.01)	0.2
27.	Phenols as C ₆ H ₅ OH	IS 3025 Pt (43)1992,RA 2009	mg/L	BDL (DL 0.001)	0.35
28.	Total Iron as Fe	IS 3025 (Pt 53):2003(RA 2009)	mg/L	0.21	3
29.	Manganese	IS 3025 (Pt-59):2006	mg/L	BDL (DL 0.01)	2
30.	Total Phosphorous as P	IS 3025 (Pt 31):1988(RA 2009)	mg/L	BDL (DL 0.01)	3
31.	Nitrate	IS 3025 (Pt 34):1988 (RA 2009)	mg/L	BDL (DL 1)	20
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Note:-BDL - Below Detection Limit; D.L- Detection Limit; mg/L - Milligrams per liter

CONCLUSION: ETP OUTLET EFFULENTWATER AS ABOVE PARAMETERSARE WITHIN STANDARDS

End of Report


Authorized Signatory
Dr K Ganesan - Laboratory and Quality Manager

Annexure-E

Form-1 (Rule 4)
Returns Regarding Water Consumed during the Month of November, 2021

Name and address of the Consumer	Purpose for which water consumed	Reading at the beginning of the first day of the calendar month under report	Reading at the end of the last day of the calendar month under report	Quantity of Water Consumed in Kilo Liters	If the meter was out of order, the monthly average consumption of water for the previous 3 months of the working period	Quantity of water qualifying for rebate according to the assessee	Remarks
M/s ONGC Mangalore Petrochemicals Limited, Mangalore Special Economic Zone, Permude, Mangalore -574 509	Industrial cooling, spraying in mine pits or boiler feed						
	Cooling Water	0	34296	34296			
	Boiler Feed Water	0	53884	53884			
	Fire Water	0	67808	67808			
	Domestic purpose						
	Drinking Water & Sanitation	0	4881	4881			
	Processing whereby water gets polluted and the pollutants are easily bio-degradable						
	Service Water	0	5496	5496			
Total Consumption				1,66,365			

Signature of the Consumer

Name

Address

: 
Shivaprasadh, Sr. Manager(Env)

M/s ONGC Mangalore Petrochemicals Limited, Mangalore Special Economic Zone, Permude, Mangalore -574 509

ONGC Mangalore Petrochemicals Limited

Production Details for November, 2021

Net Naptha Processed – 74,674 MT

Sl. No.	Name of the Product	Quantity, MT
1	Paraxylene (Product)	3,872
2	Benzene (Co product)	1,315
3	Reformate	57,246