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Ports and Logistics

DPCL/ENV/MOEFCC/2021-036 **27.05.2021**

To
The Deputy Director General of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office Eastern Zone (EZ),
A/3, Chandrasekharpur,
Bhubaneswar- 751023
E-mail: roez.bsr-mef@nic.in

Sub : Half yearly compliance report of Environment & CRZ clearance for expansion of Dhamra Port Company Limited, Dhamra, Bhadrak, Odisha for the period Oct'20 to Mar'21.

Ref: Environment & CRZ clearance for Revised Master Plan Development at Dhamra Port dated 15th November 2019 bearing F.No.11-104/2009-IA.III.

Dear Sir,

With reference to the above-mentioned letter for the said subject matter, please find enclosed herewith the compliance to the conditions stipulated in the letter for the period Oct'20 to Mar'21 in soft copy for your kind reference. The said period compliance report is being e-mailed on roez.bsr-mef@nic.in.

Thanking You,
Yours Sincerely

Krishna Kumar
Head-Environment

Encl: As above
Copy to:

1) The Director (Monitoring –IA-III Division), Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi – 110003
2) Zonal Office, Central Pollution Control Board, Southern Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700 107 (W. B.)
3) The Member Secretary, State Pollution Control Board, Odisha, Parivesh Bhawan, A/118, Unit 8, Nilakantha Nagar, Nayapalli, Bhubneswar-751012
4) The Regional Officer, State Pollution Control Board, Odisha, Plot no. 1602, Ganeshwarpur, Januganj, Balasore – 756019
5) Member Secretary OCZMA & Director , Env-cum-Spl. Secretary to Govt., Forest & Environment Dept., Govt. of Odisha, Plot No 108, Surya Nagar, Unit-VII, Bhubaneswar - 751003.

The Dhamra Port Company Limited
(A Wholly Owned Subsidiary of APSEZL)
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Revised Master Plan - Half yearly Compliance report of the conditions stipulated in Environmental and CRZ Clearance of Revised Master Plan Development of Dhamra Port project vide letter dated 15th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	**Conditions**	**Compliance Status**
Specific Condition		
I	Construction activity shall be carried out strictly according to the provisions of the CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.	Construction activities are being carried out in line to the approvals accorded and in compliance to the provisions of CRZ notification 2011, as amended till date.
II	All the recommendations and conditions specified by the Odisha State Coastal Zone Management Authority vide letter No. 163/OCZMA dated 10.05.2019 shall be complied with.	The recommendation and condition specified by the Odisha State Coastal Zone Management Authority vide letter No. 163/OCZMA dated 10.05.2019 are complied.
III	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974	Complied. Consent to Establish obtained from State Pollution Control Board, Odisha vide letter no. 1874 IND-II-CTE-6289 dated: 17.02.2020. The copy is enclosed as **Annexure – I.** Consent to operate for Phase-I & Phase-II has been renewed from State Pollution Control Board vide letter no.4218-IND-I-CON-6348 dated 24.04.2020 valid till 31.03.2025. The copy is enclosed as **Annexure-II.**
IV	The project proponent shall comply with the air pollution mitigation measures as submitted.	Complied. As a part of existing operation, following air pollution mitigation measures are being adopted. • Road cleaning by mechanized and manual means are carried out on regular basis. • Regular water sprinkling by tankers are also carried out. • Rain guns are fixed all around the stack yard for suppression of dust during stacking, reclaiming and during high wind period. • Pre wetting of cargo before tippling in wagon tippler • Dust suppression system at wagon tippler area • Mobile dust buster is also used in stack yard and other areas for controlling the fugitive emission. • Use of dust suppression system in conveyor line • Regular ambient air quality at 6 locations and stack monitoring of 6 nos. of DG stacks are being carried out through NABL approved laboratory as per the frequency and prescribed guidelines and all the results were well within the prescribed limit **(Annexure III)**. • Periodic awareness and training programs are also organized by Environment department for workers and employees.

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V	The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.	Being complied. Drainage pattern as approved under RMP will be maintained. As a part of existing operation drainage pattern is maintained. Creeks are maintained for ensuring free flow of water from both outside and inside.
VI	Dredging shall not be carried out during the fish breeding season.	Noted and the same is being complied.
VII	Dredging, etc shall be carried out in the confined manner to reduce the impacts on marine environment including turbidity and turbidly should be monitored (preferably monthly) near Kanika island during the dredging.	Being complied. Dredging is being carried out in the areas identified and approved as a part of Revised Master plan. As a part of existing operation, Periodic marine water quality monitoring including turbidity is carried out near Kanika island by engaging MOEFCC approved laboratory. The details of Marine Water quality monitoring reports for the period Oct'20 to Mar'21 are enclosed as **Annexure III.**
VIII	No underwater blasting is permitted.	No underwater blasting is carried out.
IX	Dredged material shall be disposed safely in the designated areas and also to be utilized for beach nourishment. With the enhanced quantities, the impact of dumping on the coastal environment should be studied and necessary measures shall be taken on priority basis if any adverse impact is observed.	Noted and is being complied. As a part of existing operation, capital and maintenance dredging has been carried out during the period of Oct'20 to Mar'21. Total capital dredging was 1.78 MCM and maintenance dredging was 5.34 MCM. As stipulated in EIA report and discussed in the EAC, dredged materials are disposed inside sea at MOEFCC approved designated location with (-) 20 m depth. The marine water quality monitoring is being carried out by NABL & MOEFCC accredited laboratory on periodical basis. The results conclude that there is no significant impact observed on marine water quality.
X	Shoreline should not be disturbed due to dumping. Periodical study on shoreline changes shall be conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring report	Noted. Shoreline monitoring study was carried out as a part of Environment Impact Assessment study for Revised Master plan and further, the same will be carried out at regular intervals to check the impact and if required mitigation measures will be carried out.
XI	While carrying out dredging, an independent monitoring shall be carried out by Government Agency/Institute to check the impact and necessary measures shall be taken on priority basis if any adverse impact is observed.	Noted and will be complied.
XII	The fresh water requirement of 40 MLD will be met by Desalination plant of 40 MLD which will be developed on modular basis	Noted. Desalination plant of 40 MLD which will be developed when required. Existing operational requirements are being fulfilled through Mantai

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		river. Permission for withdrawal of 2.05 cusec is obtained from Water Resource Department.
XIII	The domestic and industrial wastewater will be treated in STP and ETP and treated water will be reused / recycled for horticulture and other purposes	Noted. As a part of existing operation, four STP of capacity 140 KLD, 150 KLD, 25 KLD and 15 KLD are functioning for treatment of sewage from Port and township area. Periodic testing of water quality is being done by MOEFCC approved laboratory and the results are being submitted to SPCB/MOEFCC. All results are well within the prescribed standards. The treated water is being used for horticulture purpose. The monitoring reports is enclosed as **Annexure-III.**
XIV	Marine ecological studies and its mitigation measures for protection of phytoplankton, zooplanktons, benthic macrofauna, etc prepared by Centre of Envotech and Management Consultancy Private Limited (CEMC) as given in the EIA-EMP Report shall be complied with in letter and spirit.	Is being complied. As part of existing operations, Periodic monitoring program covering all seasons on various aspects of the coastal environs is being carried out by NABL & MoEFCC accredited laboratory. The monitoring results for the period Oct'20 to Mar'21 is enclosed as **Annexure - III.**
XV	A copy of the Marine and riparian biodiversity management plan duly validated by the State Biodiversity Board shall be obtained and implement in letter and spirit	Noted. As a part of EIA for RMP Dhamra, detailed Biodiversity Impact study and Management plan has been prepared and developed by M/s Berhampur University. Same shall be updated for submitted to the State Biodiversity Board for validation.
XVI	A periodic monitoring programme covering all the seasons on various aspects of the coastal environs need to be undertaken by NABL accredited laboratories during construction and operation phase of the project. The monitoring should cover various physico-chemical parameters coupled with biological indices such as microbes, plankton, benthos and fishes. Deviations in the parameters shall be addressed with suitable measures to conserve the marine environment and its resources.	Complied. As a part of existing operations, periodic monitoring program covering all seasons on various aspects of the coastal environs is carried out by NABL & MoEFCC accredited laboratory. The monitoring results for the period Oct'20 to Mar'21 is enclosed as **Annexure - III.**
XVII	Continuous online monitoring of air and water quality covering the project area shall be carried out and the compliance report shall be submitted to the regional office of MoEF&CC.	Noted. As a part of existing operations, periodic monitoring of air and water quality is carried out through MoEF&CC and NABL approved laboratory.
XVIII	Effective and efficient pollution control measures like covered conveyors/stacks (coal, iron ore and other bulk cargo) with fogging/back filters and water sprinkling commencing from ship unloading to stacking to evacuation shall be undertaken. Coal and iron ore stack yards shall be bounded by thick two tier green belt with proper drains and wind barriers wherever necessary. Coal should be handled properly at port limits so that the coal dust	Noted. As a part of existing operation, following pollution control measures are being implemented at site • Transportation of Coal/Iron ore is done in covered conveyor belt system. • Water sprinkling is being carried out on road on regular basis

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	will not reach the surrounding areas. Sprinklers shall be used at coal storage regularly and to monitor the coal dust in the air	• Dust suppression system has been installed in dust prone area to mitigate the fugitive emission. • Dust buster & rain gun system has been deployed in stack yard to mitigate the fugitive emission from the stack yards. • Wagon covering system is being used for covering of all loaded wagons going out of Port premises. • Road cleaning by mechanize and manual means on regular basis. • Rain guns and dust buster are being used to sprinkle water on the coal storage regularly to suppress the coal fugitive dust.
XIX	Sediment concentration should be monitored fortnightly at source and disposal location of dredging while dredging. Online monitoring system should be installed for assessing turbidly during dredging.	Is being Complied. As a part of existing operation fortnightly monitoring of sediment quality is done through MOEFCC and NABL approved laboratory. However, the possibility of installing Online Turbidity Monitoring will be explored.
XX	Marine ecology shall be monitored regularly in terms of water quality (Salinity, temperature, DO, BOD, PHc, nutrients), sediment quality (Metals, PHc, Organic carbon etc) and biological characteristics (phytoplankton, zooplankton, benthic macrofauna and other marine biodiversity components) as part of the environment management plan specified in the report. Any deviations from the baseline should be reported to the OCZMA/OSPCB	Being complied. As a part of existing operation periodic monitoring program covering all seasons on various aspects of the marine ecology monitoring is carried out by NABL & MoEFCC accredited laboratory. The monitoring results for the period Oct'20 to Mar'21 is enclosed as **Annexure - III.**
XXI	Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life, particularly benthos. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.	Noted. Utmost care is being taken to avoid spillage of fuel/engine oil and lubricants from the construction site. In case of any accidental spillage, saw dust or sand is being used along with absorbent to arrest the spillage. Used oil/waste oil/waste containing oils are handed over to SPCB approved authorized recyclers.
XXII	Necessary arrangements for the treatment of the effluents and solid wastes/ facilitation of reception facilities under MARPOL must be made and it must be ensured that they conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986. The provisions of Solid Waste Management Rules, 2016. E-Waste Management Rules, 2016, and Plastic Waste Management Rules, 2016 shall be complied with.	Noted Four numbers of STP of capacity 140 KLD, 150 KLD, 25 KLD and 15 KLD are being used for treatment of sewage water generated from Port, vessel and Township premises. Waste management are being done as per the prescribed guideline. We have color coded waste bins for collection and segregation of different types of waste. Generated wastes are being handled as per the 5R concept of waste

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		management and as per the vision of APSEZ to become "A Zero Waste to Landfill Company". Waste reception facility is provided for visiting vessel. The collected wastes are being handled and disposed as per the prescribed guideline. Plastic wastes are sent to the Cement Plant for energy recovery through co-processing. Management of plastic waste are being done as per the Plastic Waste Management Rules, 2016 The E-Waste has been sent to an authorized recycler for proper disposal is being done as per the E-Waste Management Rules, 2016.
XXIII	Compliance to Energy Conservation Building (ECBC-2017) shall be ensured for all the building complexes. Solar/wind or other renewable energy shall be installed to meet energy demand of 1% equivalent	Noted & is being complied. The following initiatives are being taken for conservation of electrical energy: 1. Use of LED lights in place of conventional lighting system within offices and Township areas. 2. Use of automatic on/off timers switch in street lightings 3. Use of solar light fitted with LED bulbs fitted in township area. 4. Use of translucent sheets in bigger shed for natural lightings during day hours 5. Use of bigger sized glass windows in offices and MCC building for natural lights in day hours 6. Use of central ACs system instead of individual ACs in bigger offices and buildings. Use of VFD (variable frequency drive) in operational area for power savings
XXIV	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	Noted & will be complied. At present no hazardous or petroleum products are being handled at shore and details RA recommendation will be complied as and when applicable, However, as a part of present operation following measures are being adopted. Disaster Management Plan was prepared was approved from District Administration. Periodic mock drills are also being carried out. Safety is being followed as per the prescribed guideline. Dedicated team lead by dedicated site safety team along with team at Corporate is ensuring best safety practices at Port premises.
XXV	Measures should be taken to contain, control and recover the accidental spills of fuel and cargo. Tier 1 should be made available with the port for attending the large oil spills. The company should inform the coast guard for availing tier 2 facility.	Necessary action has been taken to contain, control and recover the accidental spills of fuel and cargo. Oil spill contingency plan is prepared for Dhamra Port and submitted to District Administration and Coast guard. Any accidental discharge of oil / lubricants will be handled as per the plan. Port is equipped with oil spill contingency facility and

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		required dispersant chemicals. Thirteen persons have been undergone IMO Tire 1 training and four persons have undergone IMO Tire 2 training at Port. Last drill was carried out on 18.11.2020.
XXVI	Necessary arrangement for general safety and occupational health of people should be done in letter and spirit.	Complied. We have a strict safety regimen with the motto "Safety First". Safety Observations are mandatory from every department of the port and immediate measures are undertaken to rectify the shortcoming. OHSAS Guidelines and MSIHC Guidelines are followed for handling of Hazardous materials. First aid center facilities have been provided for employees and workers. Inline to this a wellness center is also operated outside the port premises for providing medical facilities for villagers.
XXVII	All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to the RO, MoEF&CC along with half yearly compliance report	Noted. Environment Management Plan is enclosed as **Annexure IV.** Expenses towards Environment management for the period of Oct'20 to Mar'21 is enclosed as. **Annexure-V.**
XXVIII	The effluent generated by desalination plant and FSRU should be released at designated sites as suggested in the EIA report.	Noted At present, no FSRU & desalination plant has been developed.
XXIX	The company shall draw up and implement Corporate Social Responsibility plan as per the Company's Act of 2013.	Noted The details work carried out under Corporate Social Responsibility plan for the period of Oct'20 to Mar'21 was 6.03 Cr and the details expenses breakup is enclosed as **Annexure-VI.**
XXX	As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 1st May 2018, project proponent has proposed an amount of Rs. 21.4998 Crores (0.125% of the project cost) under Corporate Environment Responsibility (CER) Plan for the activities such as Biodiversity Conservation, Turtle and Marine life Research Centre, Water Conservation and Water Recharge, Fishermen Alternate Livelihood Development, Agriculture and Horticulture Promotion, Community Infrastructure and Women Empowerment Promote Entrepreneurship. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District	Noted. Annual CER plan will be prepared inline to actual budget planned for the financial year and the same will be implemented. The status will be periodically submitted to the regulatory authorities as a part of Half yearly compliance report. a

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	Collector. It should be posted on the website of the project proponent.	
B. Standard Conditions: I. Statutory Compliance:		
I	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule I species in the study area).	Noted. Preparation of a site-specific Conservation Plan & Wildlife Management plan is in process. The delay is due to Covid-19 pandemic. However, DPCL has taken all-out effort for conservation of Wildlife in consultation with Forest department, particularly for the migration and nesting of Olive Ridley marine turtle.
II	Construction activity shall be carried out strictly according to the provisions of CRZ Notification, 2011 and the State Coastal Zone Management Plan as drawn up by the State Government. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.	Construction activities are being carried out in line to the approvals accorded and in compliance to the provisions of CRZ notification 2011, as amended till date.
III	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.	Noted. We have received permission for 6 nos. of bore wells from CGWA for drawl of ground water.
IV	All excavation related dewatering shall be as duly authorized by the CGWA. A NOC from the CGWA shall be obtained for all dewatering and ground water abstraction	Noted.
V	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.	Noted. 20,000 KVA power is being sourced from NESCO Odisha. The agreement copy was submitted along with last half yearly compliance report vide our letter no. DPCL/ENV/MOEFCC/2020-113 dated 23.11.2020.
VI	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Coast Guard, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.	Noted. License for storage of diesel from Chief Controller of Explosives and NOC from fire department were submitted along with last half yearly compliance report vide our letter no. DPCL/ENV/MOEFCC/2020-113 dated 23.11.2020
II. Air quality monitoring and preservation:		
I	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and	Noted. Ambient Air Quality Monitoring (twice a week) is carried out by NABL & MoEF&CC accredited agency. All emissions are well within the prescribed standards.

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	outside the project area at least at four locations (one within and three outside the plant area at an angle of 120'each), covering upwind and downwind directions.	Air monitoring is being carried out at 6 locations (3 inside & 3 outside). The locations are selected as per the EIA and at an angle of 120 each covering both upwind & down wind. Air monitoring location map was submitted along with half yearly compliance report vide our letter no. DPCL/ENV/MOEFCC/2020-113 dated 23.11.2020.
II	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed emission standards	Noted. As a part of existing operation, transportation of Coal/Iron ore is done in covered conveyor belt system. Water Sprinkling is carried out on road on regular basis through water tanker. Dust suppression system has been installed in dust prone areas to mitigate the fugitive emission. Dust buster & rain gun system has been deployed in stack yard to mitigate the fugitive emission from the stack yards.
III	Shrouding shall be carried out in the work site enclosing the dock/proposed facility area. This will act as dust curtain as well achieving zero dust discharge from the site. These curtain or shroud will be immensely effective in restricting disturbance from wind in affecting the dry dock operations, preventing waste dispersion, improving working conditions through provision of shade for the workers.	As a part of existing operation, following pollution control measures are being implemented at site • Road cleaning by mechanized and manual means are carried out on regular basis. • Regular water sprinkling by tankers are also carried out. • Rain guns are fixed all around the stack yard for suppression of dust during stacking, reclaiming and during high wind period. • Pre wetting of cargo before tippling in wagon tippler • Dust suppression system at wagon tippler area • Mobile dust buster is also used in stack yard and other areas for controlling the fugitive emission. • Use of dust suppression system in conveyor line • Regular ambient air quality at 6 locations and stack monitoring of 6 nos. of DG stacks are being carried out through NABL approved laboratory as per the frequency and prescribed guidelines and all the results were well within the prescribed limit **(Annexure III)**. • Periodic awareness and training programs are also organized by Environment department for workers and employees.
IV	Dust collectors shall be deployed in all areas where blasting (surface cleaning) and painting operations are to be carried out, supplemented by stacks for effective dispersion.	Noted No such activity has been carried out during Oct'20 to Mar'21.

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V	The vessels shall comply the emission norms prescribed from time to time.	MARPOL and Ballast Water Convention guidelines are enforced by DPCL for visiting ships.
VI	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.	Noted As a part of existing operation 6 nos of standby DG Sets of capacity ranging from 160 KVA to 200 KVA have been provided for emergency backups & uninterrupted power supply to the water supply system and firefighting system
VII	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.	Noted. DPCL has an exclusive rail connectivity for the project and has proposal for future expansion of rail-road connectivity. Besides, DPCL has participated with PWD for maintenance and improvement of the main service road to Dhamra and has shared the cost of development. As a part of RMP EIA studies, Traffic study was conducted for assessment & evaluation of feasibility of Four Lane road (which is already approved as a part of Phase –II clearance) with future provision of Two lane, to be developed as a part of Revised Master Plan to connect Bhadrak & Dhamra Port. Based on this – 1. Both Normal traffic + Generated traffic (due to proposed expansion) considered for the study. 2. Four lane (which is already approved as a part of Phase –II clearance) with future provision of 2 lane road, to be developed as a part of Revised Master Plan is proposed, which shall be sufficient to meet the Port Requirement as per the IRC guidelines. 3. Existing approach road from Jamujhadi to Dhamra will be utilized during construction phase (apart from proposed NW-5) which is being widened by GoO which will improve the traffic conditions Proposed road link will induce local traffic movement on either side and boost the travel characteristics of the people residing in nearby villages addition, for easy evacuation of cargo, a new Rail/Road/Utility Corridor (12 km x 125 m wide) is also proposed from Northern side of Dhamra Port.
III. Water quality monitoring and preservation:		

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I	The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.	Drainage pattern of the area is maintained. Creeks are periodically cleaned to ensure free flow of water from both outside and inside. Further inline to Revised Master Plan proper drainage facility will be developed as per the drainage plan.
II	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality. Silt curtains shall be used to contain the spreading of suspended sediment during dredging within the dredging area.	Noted. DPCL ensuring dredging through TSHD and further regular marine monitoring is carried out to check the level of turbidity. Silt curtain shall be used, when working near sensitive areas.
III	No ships docking at the proposed project site will discharge its on-board waste water untreated in to the estuary/ channel. All such wastewater load will be diverted to the proposed Effluent Treatment Plant of the project site.	Complied. Vessels are not allowed to discharge the onboard wastewater in estuary/channel. The vessels have their own STP where sewage water is being treated. However, DPCL will explore the possibility of treating wastewater generated from ships.
IV	Measures should be taken to contain, control and recover the accidental spills of fuel and cargo handle.	Noted Oil spill control equipment such as booms / barriers are in readiness for oil containment and skimmers for recovery. Depending upon the type of oil spill, containment measures will be carried out in cooperation of the Coast-Guard. Oil Spill drills are conducted on a regular basis.
V	The project proponents will draw up and implement a plan for the management of temperature differences between intake waters and discharge waters.	Noted. As of existing operation facility, there is no intake or discharge.
VI	Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.	Utmost care is being taken to avoid spillage of fuel/engine oil and lubricants from the construction site. In case of any accidental spillage, saw dust or sand is being used along with absorbent to arrest the spillage. Used oil/waste oil/waste containing oils are handed over to SPCB approved authorized recyclers. Marine water quality & productivity is monitored by MoEFCC accredited laboratory. There are no adverse impact on water quality and marine productivity in the vicinity.
VII	Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.	Noted. As a part of existing operation, required fresh water is sourced with the permission from Water Resource department, Government of Odisha.
VIII	Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused for horticulture, flushing, backwash, HVAC purposes and dust suppression.	Noted. As a part of existing operation, Four numbers of STP of capacity 140 KLD, 150 KLD, 25 KLD and 15 KLD are used for treatment of sewage from Port and township area. Periodic testing of water quality is being done by MOEFCC approved laboratory and

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		the results are being submitted to SPCB/MOEFCC. All results are well within the prescribed standards. The treated water is being used for horticulture purpose.
IX	A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.	21,957.166 KL of waste water generated during Oct'20- Mar'21 and has been treated in STP /ETP before reusing for Horticulture/dust suppression purpose.
X	No diversion of the natural course of the river shall be made without prior permission from the Ministry of Water resources.	No such diversion is required / proposed for the project.
XI	All the erosion control measures shall be taken at water front facilities. Earth protection work shall be carried out to avoid erosion of soil from the shoreline/boundary line from the land area into the marine water body.	Noted and will be complied.
IV. Noise monitoring and prevention:		
I	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report	Noted. As a part of existing operation Noise monitoring is carried out on monthly basis by engaging accredited NABL & MOEFCC laboratory. The Monitoring results are also submitted to the Regional office on regular basis. The copy is enclosed as **Annexure - III.**
II	Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment.	Noted As a part of existing operations, • Noise attenuation is being practiced for noisy equipment by employing suitable techniques such as acoustic controls, insulation and vibration dampers • Personnel exposed to noise levels beyond threshold limits has been provided with protective gear like earplugs, earmuffs, etc. • DPCL have a strict maintenance regimen for all plant machinery and equipment which is reviewed by the management every day. • Noise Monitoring is being carried out by a NABL & MOEFCC accredited laboratory.
III	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.	Noted. DG set used in existing operation is equipped with acoustic enclosure and noise barrier.
IV	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	Noted. As part of Existing operation, noise monitoring is carried out at 6 (six) locations, on monthly basis by engaging NABL & MOEFCC accredited laboratory. All results are within the prescribed limits. The result is enclosed as **Annexure – III.**

Revised Master Plan - Half yearly Compliance report of the conditions stipulated in Environmental and CRZ Clearance of Revised Master Plan Development of Dhamra Port project vide letter dated 15th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	**Conditions**	**Compliance Status**
V. Energy Conservation measures:		
I	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.	Noted. DPCL had already installed solar lights along the roads and common areas. Solar power generation activity will be continued in other areas.
II	Provide LED lights in their offices and residential areas.	Noted. LED lights are fitted in township and Port common area. Lighting of many operational areas are also replaced with LED lights wherever possible. DPCL will further explore the possibility of using more LED light in their offices and residential area.
VI. Waste management:		
I	Dredged material shall be disposed safely in the designated areas.	Complied. As a part of existing operation, capital and maintenance dredging has been carried out during the period of Oct'20 to Mar'21. As stipulated in EIA report and discussed in the EAC, dredged materials are disposed inside sea at MOEFCC approved designated location. The marine water quality monitoring is being carried out by NABL & MOEFCC accredited laboratory on periodical basis. The results conclude that there is no significant impact observed on marine water quality.
II	Shoreline should not be disturbed due to dumping. Periodical study on shoreline changes shall be conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring report	Noted and will be complied.
III	Necessary arrangements for the treatment of the effluents and solid wastes must be made and it must be ensured that they conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986	As a part of existing operation 3 nos. of settling pond has also been constructed with addition of chemical dosing for treatment of wastewater generated from the port. Hazardous waste is being handled as per the Hazardous waste Management Rule. We have color coded waste bins for segregating different category of solid waste. Waste generated is being handled in line to 5R concept of waste management, as per the vision of APSEZ to become "A Zero Waste to landfill Company".
IV	The solid wastes shall be managed and disposed as per the norms of the Solid Waste Management Rules, 2016	Noted DPCL has developed a vision for making itself – "A Zero Waste to Landfill Port" by adoption of 5R principle of waste management i.e. Reduce, Reuse, Reprocess, Recycle & Recover. During the period Oct'20 to Mar'21, a total quantity of 91.052 MT of solid waste has been handled in line to 5R concept.

Revised Master Plan - Half yearly Compliance report of the conditions stipulated in Environmental and CRZ Clearance of Revised Master Plan Development of Dhamra Port project vide letter dated 15th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	Conditions	Compliance Status
		We have color coded bins for segregating different category of solid waste. Biodegradable wastes are used for compost preparation. Recyclable wastes are handed over to authorized recyclers.
V	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.	Construction and demolition activities related waste are handled as per Construction and Demolition Waste Management Rules, 2016 and used for filling low lying area within our port premises.
VI	A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project	Noted. DPCL has undertaken the management of solid waste with a vision for achieving – "A Zero Waste to landfill Port" by adopting '5R principle of waste management i.e. Reduce, Reuse, Reprocess, Recycle & Recover'. During the period Oct'20 to Mar'21, a total quantity of 91.052 MT of solid waste has been handled in line to 5R concept. We have color coded bins for segregating different category of solid waste. Biodegradable wastes are used for compost preparation. Recyclable wastes are handed over to authorized recyclers.
VII	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination	Complied. CFLs and TFLs are properly collected and disposed off for recycling to authorized e-waste recyclers as per the prevailing guidelines /rules of the regulatory authority to avoid mercury contamination.
VIII	Oil spill contingency plan shall be prepared and part of DMP to tackle emergencies. The equipment and recovery of oil from a spill would be assessed. Guidelines given in MARPOL and Shipping Acts for oil spill management would be followed. Mechanism for integration of terminals oil contingency plan with the overall area contingency plan under the co-ordination of Coast should be covered	Noted Oil spill contingency plan is prepared for Dhamra Port and submitted to District Administration and Coast guard. List of equipment is enclosed as **Annexure-VII.** Any accidental discharge of oil / lubricants will be handled as per the plan. Port is equipped with oil spill contingency facility and required dispersant chemicals. Thirteen persons have been undergone IMO Tire 1 training and four persons have undergone IMO Tire 2 training.
VII. Green Belt:		
I	Green belt shall be developed in area as provided in project details with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	Noted. As a part of existing operation a large nursery of multi species has been established for greenbelt development. The nursery constructed in an area of 1.5 acres with modern poly house & green house for effective plant production. More than 70 thousand saplings were developed from the nursery during last year having local plant species, forest species, seasonal plants, ornamental shrubs, Indoor plants, medicinal plants, etc. Forest species

Revised Master Plan - Half yearly Compliance report of the conditions stipulated in Environmental and CRZ Clearance of Revised Master Plan Development of Dhamra Port project vide letter dated 15th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	**Conditions**	**Compliance Status**
		and local species like Casuriana, Terminalia, Bahunia, Pongamia, Tecoma, Peltophoroum, Delonix, Neem, Calliandra, Bakul,Plumeria, Conocarpous etc are produced. Total 2687 nos. of plantation has been carried out during Oct'20 to Mar'21. The Total cost spent for plantation for the period Oct'20 to Mar'21 is 1.9 lakhs. Earlier plantation has been done along the both edges of the 62.5 km rail corridor, in adjacent villages and inside the port premises. Photographs are enclosed as **Annexure-VIII.**
II	Top soil shall be separately stored and used in the development of green belt	Complied.
VIII. Marine Ecology:		
I	Dredging shall not be carried out during the fish breeding and spawning seasons.	Noted and is being complied. Dredging is being carried out in the areas identified and approved as a part of Revised Master plan. As a part of existing operation, Periodic marine water quality monitoring including turbidity is carried out near Kanika island by engaging MOEFCC approved laboratory.
II	Dredging, etc shall be carried out in the confined manner to reduce the impacts on marine environment	Noted Dredging is being carried out in the areas identified and approved as a part of Revised Master plan. As a part of existing operation, Periodic marine water quality monitoring including turbidity is carried out near Kanika island by engaging MOEFCC approved laboratory. The details of Marine Water quality monitoring reports for the period Oct'20 to Mar'21 are enclosed as **Annexure III.**
III	The dredging schedule shall be so planned that the turbidity developed is dispersed soon enough to prevent any stress on the fish population.	Noted & will be complied. Dredging is being carried out in the areas identified and approved as a part of Revised Master plan. As a part of existing operation, Periodic marine water quality monitoring including turbidity is carried out near Kanika island by engaging MOEFCC approved laboratory. The details of Marine Water quality monitoring reports for the period Oct'20 to Mar'21 are enclosed as **Annexure III.**
IV	While carrying out dredging, an independent monitoring shall be carried out through a Government Agency/Institute to assess the impact and necessary measures shall be taken on priority basis if any adverse impact is observed	Noted and will be complied. Dredging is being carried out in the areas identified and approved as a part of Revised Master plan.
V	A detailed marine biodiversity management plan shall be prepared through the NIO or any other institute of repute on marine, brackish water and fresh water ecology and biodiversity and submitted	Noted & will be complied. As a part of EIA for RMP Dhamra, detailed Biodiversity Impact study and Management plan has been prepared and developed by M/s

Revised Master Plan - Half yearly Compliance report of the conditions stipulated in Environmental and CRZ Clearance of Revised Master Plan Development of Dhamra Port project vide letter dated 15th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	**Conditions**	**Compliance Status**
	to and implemented to the satisfaction of the State Biodiversity Board and the CRZ authority. The report shall be based on a study of the impact of the project activities on the intertidal biotopes, corals and coral communities, molluscs, sea grasses, sea weeds, sub-tidal habitats, fishes, other marine and aquatic micro, macro and mega flora and fauna including benthos, plankton, turtles, birds etc. as also the productivity. The data collection and impact assessment shall be as per standards survey methods and include underwater photography	Berhampur University. Same shall be updated for submission to the State Biodiversity Board / CRZ authority for validation.
VI	Marine ecology shall be monitored regularly also in terms of sea weeds, sea grasses, mudflats, sand dunes, fisheries, echinoderms, shrimps, turtles, corals, coastal vegetation, mangroves and other marine biodiversity components including all micro, macro and mega floral and faunal components of marine biodiversity	As a part of existing operation periodic monitoring program covering all seasons on various aspects of the marine ecology monitoring is being carried out by NABL & MoEFCC accredited laboratory.
IX. Public hearing and Human health issues:		
I	The work space shall be maintained as per international standards for occupational health and safety with provision of fresh air respirators, blowers, and fans to prevent any accumulation and inhalation of undesirable levels of pollutants including VOCs	Noted & Compiled. As a part of existing operation periodic VOCs monitoring is being carried out by NABL & MoEFCC accredited laboratory. Report is enclosed as **Annexure - III.**
II	Workers shall be strictly enforced to wear personal protective equipments like dust mask, ear muffs or ear plugs, whenever and wherever necessary/ required. Special visco-elastic gloves will be used by labour exposed to hazards from vibration.	Complied Workers are strictly enforced to wear PPE equipment's like dust mask, ear-muffs, ear plugs whenever & wherever required as per the DPCL PPE policy. As a part of existing operation periodic Work Zone noise monitoring is being carried out by NABL & MoEFCC accredited laboratory. Report is enclosed as **Annexure - III.**
III	In case of repair of any old vessels, excessive care shall be taken while handling Asbestos & Freon gas. Besides, fully enclosed covering should be provided for the temporary storage of asbestos materials at site before disposal to CTSDF.	Not Applicable.
IV	Safety training shall be given to all workers specific to their work area and every worker and employee will be engaged in fire hazard awareness training and mock drills which will be conducted regularly. All standard safety and occupational hazard measures shall be implemented and monitored by the concerned officials to prevent the occurrence of untoward incidents/ accidents	Complied. The employees, workers of DPCL have been trained on safety guidelines. Regular Fire training, Mock Drills are conducted as per the Crisis Management Plan. The details of drills, Safety training, Fire training conducted towards dock safety for the period Oct'20 to Mar'21 is enclosed as **Annexure-IX.**

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S. No.	**Conditions**	**Compliance Status**
V	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented	Complied. As a part of existing operation, DPCL have Disaster Management Plan and Emergency Response Plan, that is implemented as and when required. Copy was submitted along with last half yearly compliance report vide our letter no. DPCL/ENV/MOEFCC/2020-50 dated 23.05.2020.
VI	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project	Noted. Maximum construction labor engaged at construction site are from nearby villages area and are staying at their own house. Construction labors coming from outside area are residing in our workers colony specially built for non-local labors. All basic facilities such as clean water, electricity, toilet, bathroom, medical health care, STP, safe drinking water etc are provided in this colony. Photographs attached as **Annexure X**.
VII	Occupational health surveillance of the workers shall be done on a regular basis	Complied Occupational Health Surveillance of the workers is being carried out on half yearly basis at the time of gate pass renewal.
X. Corporate Environment Responsibility:		
I	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six monthly report.	Noted. Copy of APSEZ Environment policy was submitted along with half yearly compliance report vide our letter no. DPCL/ENV/MOEFCC/2020-113 dated 23.11.2020.
II	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.	DPCL has a well-structured Environmental Management Cell, staffed with qualified manpower at site supported by team at Head Office in Ahmedabad.
III	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be	Noted & will be complied. As a part of existing operation EMP has been prepared. Environment Management Plan is enclosed as **Annexure IV**.

Revised Master Plan - Half yearly Compliance report of the conditions stipulated in Environmental and CRZ Clearance of Revised Master Plan Development of Dhamra Port project vide letter dated 15th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	Conditions	Compliance Status
	reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	
IV	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Noted. Internal and external IMS audit (Integrated Management System) is being carried out by internal auditor (half yearly) / external agency (annually) as per ISO 14001:2015 (Environment Management System). Same will be continued for Revised Master Plan development of the Port.
XI. Miscellaneous:		
I	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Complied The Paper clippings of the Advertisement was already submitted vide our letter no DPCL/ENV/OSPCB/2020-20 dated 01.02.2020.
II	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied. The receipt of the said letters was already submitted vide our letter no DPCL/ENV/OSPCB/2020-20 dated 01.02.2020.
III	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Complied. Status of Compliance of the stipulated environment clearance conditions for Revised Master Plan, including results of monitory data will be updated on half yearly basis
IV	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Complied. Last Half Yearly compliance report was submitted vide letter no. DPCL/ENV/MOEFCC/2020-113 dated 23.11.2020.
V	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company	Complied Environmental Statement for FY 2019-20 was submitted to SPCB Odisha vide our letter no. DPCL/ENV/OSPCB/2020-91 dated 21.09.2020. Copy was submitted along with Half Yearly compliance report vide letter no. DPCL/ENV/MOEFCC/2020-113 dated 23.11.2020.
VI	The criteria pollutant levels namely; $PM_{2.5}$, PM_{10}, SO_2, NOx (ambient levels) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied As a part of Existing operation Ambient Level is being monitored with a frequency (weekly twice) by a NABL & MOEFCC accredited laboratory. The Monitoring data is being displayed at DPCL main gate for public view.

Revised Master Plan - Half yearly Compliance report of the conditions stipulated in Environmental and CRZ Clearance of Revised Master Plan Development of Dhamra Port project vide letter dated 15th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	**Conditions**	**Compliance Status**
VII	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project	Noted.
VIII	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Complied. Consent to Establish obtained from State Pollution Control Board, Odisha vide letter no. 1874 IND-II-CTE-6289 dated: 17.02.2020. The copy is enclosed as **Annexure – I.** Consent to operate for Phase-I & Phase-II has been renewed from State Pollution Control Board vide letter no.4218-IND-I-CON-6348 dated 24.04.2020 valid till 31.03.2025. The copy is enclosed as **Annexure-II.**
IX	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee	Noted. Environment Management Plan is enclosed as **Annexure IV.** Commitments made during Public hearing are being complied.
X	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Noted. Port layout is enclosed as **Annexure- XI.**
XI	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted
XII	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Noted
XIII	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted
XIV	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Noted and is complied with full cooperation during the inspection.
XV	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability	Noted.

Revised Master Plan - Half yearly Compliance report of the conditions stipulated in Environmental and CRZ Clearance of Revised Master Plan Development of Dhamra Port project vide letter dated 15th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	**Conditions**	**Compliance Status**
	Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	
XVI	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted

List of Annexure

Sl.No	Annexure Number	Details
01	Annexure-I	Consent to Establish
02	Annexure-II	Consent to Operate
03	Annexure-III	Environment Monitoring Report
04	Annexure-IV	Environment Management Plan
05	Annexure-V	Environment Management Expenses
06	Annexure-VI	CSR Plan & Expenditure details
07	Annexure-VII	List of Oil Spill Control Equipment
08	Annexure-VIII	Greenbelt Photograph
09	Annexure-IX	Fire Training and Mock drill
10	Annexure-X	Labor colony photograph
11	Annexure-XI	Port Layout

ANNEXURE-I

Tel : 2564033/2563924
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Web site : www.ospcboard.org

OFFICE OF THE

STATE POLLUTION CONTROL BOARD, ODISHA

Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII,
Bhubaneswar - 751 012

By Speed Post / Through Online

No. 1874 / IND-II-CTE- 6289 Date 17.02.2020 /

CONSENT TO ESTABLISH ORDER

In consideration of the online application no. **2231670** for obtaining Consent to Establish of **M/s Dhamra Port Company Ltd.** the State Pollution Control Board is pleased to convey its Consent to Establish Under Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Under Section 21 of Air (Prevention & Control of Pollution) Act, 1981 for **Revised Master Plan Development (5 years) of Dhamra Port for enhancement of Cargo Handling capacity of the port (bulk cargo, LNG / POL / Crude oil / Container / Multipurpose Cargo, Liquid / Cryogenic / Gas Cargo, Barges along with port backup facility / Infrastructure / Port Construction Equipment Facility) from 96.3 MMTPA & 1 Million TEU containers to 169.5 MMTPA along with installation of DG set of capacity 1x12000 KVA with additional cost of ₹ 17,518 Crore over a total area of 2013.4 Ha, At/Po - Dosinga, Via- Dhamra** (plot nos. & khata nos. as mentioned in application form) in the district of **Bhadrak** with the following conditions.

GENERAL CONDITIONS

1. This Consent to Establish is valid for the Port activity as mentioned in the application form. This order is valid for five years. The proponent shall commence construction of the project within a period of five years from the date of issue of this order. If the proponent fails to do substantial physical progress of the project within five years then a renewal of this Consent to Establish shall be sought by the proponent.
2. The industry shall comply to the provisions of Environment Protection Act, 1986 and the rules made there under with their amendments from time to time such as the Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 as amended from time to time, Hazardous Chemical Rules, / Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 etc. and amendments there under. The industry shall also comply to the provisions of Public Liability Insurance Act, 1991, if applicable.
3. The Industry is to apply for grant of Consent to Operate under Section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of Air (Prevention & Control of Pollution) Act, 1981 at least 3 (three) months before the commercial production and obtain Consent to Operate from this Board.
4. **This Consent to Establish is subject to statutory and other clearances from Govt. of Odisha and/or Govt. of India, as and when applicable.**

SPECIAL CONDITIONS:

GENERAL:

1. The proponent shall obtain CRZ and Environmental Clearance from MoEF&CC, Govt. of India for Revised Master Plan Development (5 years) for enhancement of

cargo handling capacity from 96.3 MMTPA & 1 Million TEU containers to 169.5 MMTPA.

2. The proponent shall obtain forest clearance if forest land is involved in the project area.
3. This Consent to Establish is granted for the capacity as mentioned above and any expansion in the capacity, change or modification in the process, addition, alternation any nature has to be undertaken with prior approval of the Board. For any change in the site or area, fresh Consent to Establish has to be obtained from the Board. The proponent shall carry out construction activity as per approved revised lay out map (**enclosed**). If the proponent wants to change the approved plant layout map, they can submit a modified plant layout map with adequate justification for such modification.
4. The proponent shall implement the pollution control measures and safeguards as proposed in the Environment Management Plan (EMP).
5. The proponent shall obtain permission from concerned authorities for drawal of surface water.
6. The construction and demolition wastes to be generated from the proposed project shall be disposed of in accordance with the provision under "Construction & Demolition Wastes Management Rules 2016".
7. The proponent shall comply to the provisions of E-Waste (Management) Rules, 2016 and shall handover e-waste to authorized collection centers/ register dismantlers/ recyclers for proper disposal of e-waste.
8. All the plastic waste generated from industry during construction and commissioning shall be collected and sent for co-processed in a cement kiln.
9. Sector wise follow – up of some 'DO & DONTS' by the ground workers shall be made mandatory for better maintenance of material and machines to ensure prevention of hazards / accidents to some extent.
10. Temporary colonies of work force shall be established sufficiently away from the High Tide Line and proper sanitation including toilets and bathrooms shall be provided to the inhabitants to prevent abuse of the inter tidal area. Sewage and other wastes generated in these settlements shall not be released to the creek. Work force shall be provided with adequate fuel to discourage them from cutting nearby tree for firewood.
11. 'Good House Keeping' is the most important area of concern and it shall be attained by developing available human resources through conducting routine in house workshops on different activities for the betterment of the environment and welfare of the workers and organization.
12. Comprehensive structure of "Environmental Management Cell" and the infrastructure facilities shall be developed etc. shall be detailed.
13. Present & post project land use pattern of acquired land shall be prepared and submitted to the Board for reference.
14. The impact on marine ecology during the construction phase shall be largely confined to the duration over which the activities are spread. Hence, the key factor in minimizing the adverse impacts shall be the reduction in the construction period at the site.

15. The socio-economic especially related to fishing, infrastructure development etc. shall be studied as large scale infrastructure like road network, railways, power lines etc. shall develop in the vicinity of area due to this project.
16. Monitoring of the marine environment shall be conducted regularly during dredging and post-dredging and necessary corrective measures shall be carried out to conserve the marine environment.
17. The inter tidal and near shore areas shall be restored to their original contours once the construction activities are completed. General clean – up along the corridor used for construction related activities, adjacent inter tidal areas, creeks etc. shall be undertaken and all the discarded materials must be removed from the site and aesthetic quality of the surroundings restored, once the construction operations are completed.
18. Detailed construction activities taken up in the CRZ area shall be submitted to the Board at the time of grant of Consent to Operate.
19. Details of transportation and its impact during transportation of the stones and other construction material for the construction of the groynes breakwaters and other Port facilities shall be submitted to the Board.
20. Road – connectivity shall be developed by the Port Authority. Fly ash shall be used for road development. Agreement with power plants shall be made for lifting of ash from power plant.
21. A green belt of adequate width and density preferably with local species along the periphery of the Port shall be raised so as to provide protection against particulates and noise. It must be ensured that at least 33% of the total land area shall be under permanent green cover, in such a manner that, atleast plantation shall be taken up at least in 20% of the total green belt area and progressively achieve 100% in a span of five years and under no circumstances this land earmarked for green belt shall be used for any other purpose.
22. Open storage yards for dust prone materials shall be surrounded with green belt. Plantation and development of lawns shall be undertaken to minimize the effect of dust and noise.
23. The Port authority shall take up adequate measure for routine health checkup of its employees / workers and the people residing in the neighborhood of the plant free of cost.
24. The civil construction shall be carried out with the fly ash bricks. If the fly ash bricks are not available locally the civil construction may carried out with other bricks with prior intimation to the concerned Regional Office of SPC Board. A quarterly statement indicating the use of fly ash bricks during civil construction shall be submitted to the Board for record.
25. Vehicle hired for bringing construction material at site should be in good condition and shall have valid Pollution Under Check (PUC) Certificate and to confirm to applicable air and noise emission standards and shall be operated only during non-peaking hours.
26. The Board may impose further conditions or modify the conditions stipulated in this order during installation and /or at the time of obtaining consent to operate and may

revoke this clearance in case the stipulated conditions are not implemented and /or any information suppressed in the application form.

WATER POLLUTION:

27. The domestic wastewater generated from the industry shall be treated in sewage treatment plant of adequate capacity to meet the following standards as notified by the MoEF&CC, Govt. of India vide G.S.R. 1265 (E), dated 13.10.2017. The treated water shall be reused for dust suppression, irrigating greenbelt etc. Under no circumstances there shall be any discharge of treated waste water to outside the factory premises.

Sl. No.	Parameters	Standards
1.	pH	6.5-9.0
2.	BOD (mg/l)	30
3.	TSS (mg/l)	<100
4.	Fecal Coliform (MPN/100ml)	< 1000

28. The proponent shall adopt Zero Liquid Discharge (ZLD) concept and under no circumstances the waste water shall be discharged to outside the premises.

29. The proponent shall construct dedicated drainage system of runoff water in the whole Port area and the runoff water shall be treated properly and collected for use in the purpose of sprinkling at transfer points of conveyor belts and roads and the surplus water shall be discharged to outside of the Port premises.

30. The proponent shall not discharge untreated runoff water from the berths including other Port areas to the sea harbor under any circumstances.

31. The spillage of bulk items shall be minimized as these materials reach the dock waters, which sometimes accumulate in the sediments. These pollutants and metals may mobilized by microbes or bottom disturbances and get back into the dock waters and ultimately reach water body.

32. Strict prohibition shall be practiced against the discharge of ballast water and sediment in the dock water, estuarine / near shore waters to prevent introduction of exotic microorganisms including pathogens in the local waters.

33. The monitoring of the marine environment during dredging and post – dredging over a period shall be carried out and the corrective measures shall be taken to conserve the marine environment.

34. Steps shall be taken towards the maintenance of health of the study area, critical locations shall be carefully selected and designed as monitoring sites for periodic monitoring with respect to water quality, sediment quality and flora and fauna.

35. The proponent shall install Effluent Treatment Plant (ETP) of capacity 3 MLD to treat the waste water generated in the berth, stack yard and other areas of the Port.

36. Details of drainage system in the berth and stack yard and the Effluent Treatment Plant shall be provided in order to treat the discharge/runoff form the stack yard.

37. The surface run off from open stack yards and mineral handling area shall be collected and adequately treated to meet prescribed standard for inland surface water before discharge to river.

38. Adequate firefighting system shall be adopted at the coal stock yard to control fire hazard if any.

39. Leachate from storage of chemicals and other materials having toxic content if any shall be collected and treated properly. Care shall be taken to prevent the ground water contamination.

40. An effective oil spillage containment and management plan shall be evolved with the involvement of various agencies like Port, Pollution Control Board, Indian Coast Guard Oil Companies etc.

41. On site living rooms of workers and the gas storage shall be well apart to minimize the risk of accidents. Adequate safety measures including provision of gas mask and ear plugs during cutting operation and medical treatment facilities for workers in case of accidents shall be ensured. The working place shall be provided with better sanitation facilities.

42. The sea water in the harbor area shall meet the water quality criteria for SW-IV class of sea water as given below :

a)	pH	:	6.5 – 9.0
b)	Dissolved oxygen	:	3.0 mg/l or 40% of saturation value whichever is high.
c)	Colour and odour	:	No visible colour or offensive odour
d)	Floating matter, Oil & grease and scum including petroleum product	:	10 mg/l
e)	Fecal coliform	:	500 MPN/100 ml
f)	BOD (3 days) at 27°C	:	5 mg/l

43. Maximum precaution shall be taken to minimize spreading of sediments to the surrounding area which will otherwise increase turbidity in the river.

44. Rain water harvesting shall be followed by utilizing the rain water collected from the roof of the administrative buildings for recharging of ground water within the premises as per the concept and practices prescribed by CPCB.

AIR POLLUTION:

45. Necessary preventive measures shall be taken during construction phase so that the ambient air quality including noise shall conform to National ambient air quality standards and standards for noise in industrial area as per **Annexure-I & II**. Ambient air quality at the boundary of the Port premises shall meet the prescribed standards of the Board as per **Annexure - I**. The ambient air quality monitoring report shall be submitted to the Board every month.

46. The ambient air quality including noise shall be within the prescribed norms of Environment Protection Act, 1986 for industrial area and at least 04 continuous ambient air quality monitoring stations around the Port premises shall be set up to monitor Suspended Particular Matter, SO_2, NOx, CO and other important parameters within at least to the distance in down wind direction and where maximum ground level concentration is anticipated. The exact location of the monitoring stations shall be finalized in consultation with the State Pollution Control Board.

47. The height of the stack attached to the D.G sets shall confirm to the following:

$H = h + 0.2\sqrt{KVA}$ (Where, h = Height of the building where it is installed in meter KVA = Capacity of D.G Set and H = Height of the stack in meter above ground level)

48. Wire mesh screen of height 9 meter shall be provided all along the boundary of the Port premises to avoid fugitive dust emission to the surroundings.

49. To minimize noise and vibration, heavy machinery shall be properly installed and maintained. Personal protection in the form of earplugs shall be made available to the workers, who are exposed to the high noise areas like workshop, dumper house, crane operation, tipper shop etc.

50. The noise level during pilling, transport and erection of structures etc. shall be kept to a minimum through proper lubrication, muffing and modernization of equipments.

51. Air compressor and DG set shall be acoustically designed and shall be housed in appropriate acoustic enclosures so that the noise level outside it shall conform to the prescribed norms.

52. Water sprinkling, use of wind barriers and covered conveyer at various stages of coal handing shall be practiced. Other exhaust arrangement and bag filter may be included to minimize SPM content. While loading and unloading coal and other bulk materials through grab and conveyers, the dropping height shall be minimized.

53. The pollution caused by coal / iron ore is aggravated by its dispersal with winds. Since the wind in the area is strong it is recommended that the coal / iron ore shall be sprinkled with water so as to reduce the chances of the dust dispersed over a large area including the sea/river.

54. Adequate dust suppression and or extraction system shall be installed at all potential dust generating points in ore/mineral handling system to minimize fugitive emission.

55. The collection and handling of raw materials shall be carried out in closed conveyor so that fugitive emission will be minimum.

56. The ballast shall be scientifically disposed.

SOLID AND HAZARDOUS WASTE:

57. Dedicated temporary storage facility of used / waste oil, grease etc. shall be provided inside the Port premises for final disposal.

58. Mechanisms shall be evolved for proper monitoring, effective handling and transportation of hazardous chemicals. The mechanism for import of hazardous wastes may be strengthened with involvement of the State Pollution Control Boards.

59. An effective wastes collection, treatment and disposal mechanism shall be evolved for incoming ships as well as waste generated within the Port that include ballast and bilge water, solid waste, cargo waste, kitchen waste, toilet effluent, packing materials, floating debris, construction left over materials etc. A detail management plan to this effect shall be submitted to the Board.

60. Effective monitoring system shall be evolved to check the release of spillage of oil into the dock waters, estuary and near shore water by ship and also during transportation. Proper collection and treatment facilities shall be provided for proper treatment and disposal after achieving the standards.

61. A comprehensive Disaster Management Plan shall be formulated involving concerned agencies considering various aspects like containment of large scale oil spillage, accidental hazards arising from handling of dangerous / inflammable cargoes as well as natural calamities.

62. The industry shall obtain authorization for management of Hazardous Waste as per previsions of Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 as amended from time to time.

63. Municipal Solid Waste generated from the Port shall be disposed off as per the Solid Waste Management Rules, 2016 and amendment thereafter.

64. The proponent shall establish Mechanized Waste Convertor having polycrack method and other similar method for processing of Municipal Solid Waste generated from the Port, under covered shed to produce valuable products like oil, water, gas, carbon, metal, glass etc.

65. Spoils generated from dredging activity shall be cautiously disposed off in a proper manner to avoid contamination as recommended in the EIA.

66. The solid waste generated as ETP sludge and from other sources shall be suitably disposed off without causing any public nuisance or environmental contamination.

67. All compliance shall be made with respect to manufacture, storage and import of Hazardous Chemical Rule, 1989 & amended thereafter and other provisions of the Environment Protection Act, 1986.

Encl: (i) Annexure – I & II
(ii) Approved layout map

15/02/2020
MEMBER SECRETARY

To,

Cdr. Anil Kumar Kar,
M/s. Dhamra Port Company Ltd.,
Fortune Towers, 2nd Floor,
Chandrasekharpur, Bhubaneswar-751023, Odisha

Memo No. 1875 **/Date** 17.02.2020 /

Copy forwarded to:

1. The Director (Env.)-cum-Special Secretary to Govt., F & E Deptt., Govt. of Odisha.
2. The District Magistrate & Collector, Bhadrak
3. District Industries Centre, Bhadrak
4. The Director, Factories & Boiler, Bhubaneswar
5. HSM Cell, SPC Board, Bhubaneswar
6. DFO, Bhadrak
7. Consent to Operate Section, SPC Board, Bhubaneswar
8. Regional Officer, SPC Board, Balasore
9. Copy to Guard file

CHIEF ENV. ENGINEER

O/C

टिप्पण :

1.जब कभी और जहां भी किसी अपने-अपने प्रवर्ग के लिये दो क्रमिक प्रचालन दिनों पर मापित मूल्य, उक्त विनिर्दिष्ट सीमा से अधिक हो तो इसे नियमित या निरंतर प्रचालन तथा अतिरिक्त अन्वेषण करवाने के लिये पर्याप्त कारण समझा जायेगा।"।

[फा. सं. क्यू-15017/43/2007-सी.पी.डब्ल्यू.]

रजनीश दुबे, संयुक्त सचिव

टिप्पण : मूल नियम, भारत के राजपत्र में असाधारण सं.का.आ.844 (अ), तारीख 19 नवम्बर 1986 द्वारा प्रकाशित किये गये थे और पश्चातवर्ती संशोधन सं.का.आ.433 (अ), तारीख 18 अप्रैल 1987, सा.का.नि. 176 (अ), तारीख 2 अप्रैल 1996 और हाल में ही सा.का.नि. 97 (अ), तारीख 18 फरवरी 2009; सा.का.नि. 149 (अ), तारीख 4 मार्च, 2009; सा.का.नि. 512 (अ), तारीख 9 जुलाई, 2009; सा.का.नि. 543 (अ), तारीख 22 जुलाई, 2009; सा.का.नि. 595 (अ), तारीख 21 अगस्त, 2009; और सा.का.नि. 974 (अ) तारीख, 04 नवम्बर 2009 द्वारा प्रकाशित किए गए।

MINISTRY OF ENVIRONMENT AND FORESTS

NOTIFICATION

New Delhi, the 16th November, 2009

G.S.R. 826(E).— In exercise of the powers conferred by section 6 and section 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:—

1. (1) These rules may be called the Environment (Protection) Seventh Amendment Rules, 2009.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Environment (Protection) Rules, 1986 (hereinafter referred to as the said rules), in rule 3, in sub-rule (3B), for the words, brackets, figures and letters, "in columns (3) to (5) of Schedule VII", the words, brackets, figures and letters "in columns (4) and (5) of Schedule VII" shall be substituted.

3. For Schedule VII to the said rules and entries relating thereto, the following Schedule and entries shall be substituted, namely:—

"[SCHEDULE VII]

[See rule 3(3B)]

NATIONAL AMBIENT AIR QUALITY STANDARDS

S. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO_2), µg/m³	Annual*	50	20	- Improved West and Gaeke
		24 hours**	80	80	-Ultraviolet fluorescence
2	Nitrogen Dioxide (NO_2), µg/m³	Annual*	40	30	- Modified Jacob & Hochheiser (Na-Arsenite)
		24 hours**	80	80	- Chemiluminescence
3	Particulate Matter (size less than 10µm) or PM_{10} µg/m³	Annual*	60	60	- Gravimetric - TOEM - Beta attenuation
		24 hours**	100	100	
4	Particulate Matter (size less than 2.5µm) or $PM_{2.5}$, µg/m³	Annual*	40	40	- Gravimetric - TOEM - Beta attenuation
		24 hours**	60	60	

(1)	(2)	(3)	(4)	(5)	(6)
5	Ozone (O_3) $\mu g/m^3$	8 hours**	100	100	- UV photometric
		1 hour**	180	180	- Chemiluminescence - Chemical Method
6	Lead (Pb) $\mu g/m^3$	Annual*	0.50	0.50	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper
		24 hours**	1.0	1.0	- ED-XRF using Teflon filter
7	Carbon Monoxide(CO) mg/m^3	8 hours**	02	02	- Non Dispersive Infra Red (NDIR) spectroscopy
		1 hour**	04	04	
8	Ammonia(NH_3) $\mu g/m^3$	Annual*	100	100	-Chemiluminescence
		24 hours**	400	400	-Indophenol blue method
9	Benzene (C_6H_6) $\mu g/m^3$	Annual*	05	05	- Gas chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10	Benzo(a)Pyrene (BaP) - particulate phase only, ng/m^3	Annual*	01	01	- Solvent extraction followed by HPLC/GC analysis
11	Arsenic (As), ng/m^3	Annual*	06	06	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni), ng/m^3	Annual*	20	20	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper

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

** 24 hourly or 08 hourly or.01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note.— Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.".

[F. No. Q-15017/43/2007-CPW]

RAJNEESH DUBE, Jt. Secy.

Note.— The principal rules were published in the Gazette of India, Extraordinary vide number S.O.844(E), dated the 19th November, 1986; and subsequently amended vide numbers S.O. 433(E), dated the 18th April, 1987; G.S.R. 176 (E), dated the 2nd April 1996; and were recently amended vide numbers G.S.R. 97(E), dated the 18th February, 2009; G.S.R. 149(E), dated the 4th March, 2009; G.S.R. 512(E), dated the 9th July, 2009; G.S.R. 543(E), dated the 22nd July, 2009; G.S.R. 595(E), dated the 21st August, 2009; and G.S.R. 794(E), dated the 4th November, 2009.

Printed by the Manager, Govt. of India Press, Ring Road, Mayapuri, New Delhi-110064
and Published by the Controller of Publications, Delhi-110054.

[SCHEDULE III]
(See rule 3)

AMBIENT AIR QUALITY STANDARDS IN RESPECT OF NOISE

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

Note

1. Day time is reckoned in between 6 a.m. and 9 p.m.
2. Night time is reckoned in between 9 p.m. and 6 a.m.
3. Silence zone is defined as areas upto 100 meters around such premises as hospitals, educational institutions and courts. The Silence Zones are to be declared by the Competent Authority.

   Use of vehicular horns, loudspeakers and bursting of crackers shall be banned in these zones.
4. Mixed categories of areas should be declared as one of the four above mentioned categories by the Competent Authority and the corresponding standards shall apply.

Schedule III inserted vide GSR 1063(E), dt. 26.12.89, published in the Gazette No. 643, dt. 26.12.89.

ANNEXURE-II

BY REGD. POST WITH AD

STATE POLLUTION CONTROL BOARD, ODISHA

A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012
Phone-2561909, Fax: 2562822, 2560955

CONSENT ORDER

No. 4218 / IND-I-CON-6348 Dt. 24.04.2020 /

CONSENT ORDER NO. 2749

Sub : Consent for discharge of sewage and trade effluent under Section 25/26 of Water (PCP) Act, 1974 and emission under Section 21 of Air (PCP) Act, 1981 for operation of the port.

Ref : Your online application **ID No. 2857727, Dtd.23-03-2020**

Consent to operate is hereby granted under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act, 1981 and rules framed thereunder to:

Name of the Industry: **M/s The Dhamra Port Company Limited,**

Name of the Occupier & Designation: **Shri Subrat Tripathy, Chief Executive Officer**

Address: **At/Po-Dosinga, Via-Dhamra, Dist-Bhadrak-756171, Odisha**

Details of Products Manufactured :

Sl. No.	Product	Quantity
1.	Cargo handling capacity of the Port (Dry Bulk Cargo, Break Bulk Cargo, General Cargo, Liquid Cargo, Gas Cargo)	71.84 Metric Tons/Annum
2.	Containerized Cargo (in TEU)	10,00,000 Numbers / Annum

This consent order is valid for the period upto **31.03.2025**

This consent order is valid for the specified outlets, discharge quantity and quality of effluents (ii) quantity of emission and its quality, specified chimney / stack (iii) quantity of solid waste and its disposal as specified below.

This consent is granted subject to the General and Special Conditions stipulated below:

A. Discharge permitted through the following outlet subject to the standard

Outlet No.	Description of outlet	Point of discharge	Quantity of discharge KLD or KL/hr	Pre-scribed Standard							
				pH	BOD (mg/l)	COD (mg/l)	TSS (mg/l)	NH_4-N (mg/l)	N-total (mg/l)	Fecal Coliform (MPN/ml)	O & G (mg/l)
1	Domestic effluent at the Outlet of STP	Used for Gardening	140 KLD	6.5-9.0	10	50	20	5	10	<1000	10
2	Wastewater from Port Area	No discharge to Outside	-	-	-	-	-	-	-	-	-
3	Wastewater from vehicle washing at the outlet of ETP	No discharge to Outside	3 KL/hr	-	-	-	-	-	-	-	-

B. Emission permitted through the following stack subject to the prescribed standard

Chimney Stack No.	Description of Stack attached to	Stack height (m) Above DG set	Quantity of emission (m^3/hr)	Prescribed Standard			
				PM (mg/Nm^3)	HC (mg/Nm^3)	NO_x (ppm(v))	CO (mg/Nm^3)
1	DG Set: 200 KVA	3.5	-	-	-	-	-
2	DG Set: 180 KVA	3.4	-	-	-	-	-
3	DG Set: 160 KVA	3.4	-	-	-	-	-
4	DG Set: 160 KVA	3.0	-	-	-	-	-
5	DG Set: 160 KVA	3.5	-	-	-	-	-
6	DG Set: 63 KVA	4.0	-	-	-	-	-

C. Disposal of solid waste permitted in the following manner

Sl. No.	Type of Solid waste	Quantity generated	Quantity to be reused on site	Quantity to be reused off site	Quantity disposed off	Description of disposal site.
1.	Biodegradable food waste	200 Tonne / Month	-	-	-	Composting and used for horticulture
2.	Plastic or fibri waste	100 Tonne / Month	-	-	-	Co-incineration in ACC Cement Plant, Bargarh
3.	Mettalic waste	800 Tonne / Month	-	-	-	Supplied to scrap vendor
4.	Paper & packaging material	30 Tonne / Month				Supplied to outside parties for recycling
5.	STP sludge	10 Tonne / Month				Used as manure in horticulture work

D. GENERAL CONDITIONS FOR ALL UNITS

1. The consent is given by the Board in consideration of the particulars given in the application. Any change or alternation or deviation made in actual practice from the particulars furnished in the application will also be the ground for liable to review/variation/revocation of the consent order under section 27 of the Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 and to make such variations as deemed fit for the purpose of the Acts.

2. The industry would immediately submit revised application for consent to operate to this Board in the event of any change in the quantity and quality of raw material / products / manufacturing process or quantity /quality of the effluent rate of emission / air pollution control equipment / system etc.

3. The applicant shall not change or alter either the quality or quantity or the rate of discharge or temperature or the route of discharge without the previous written permission of the Board.

4. The application shall comply with and carry out the directives/orders issued by the Board in this consent order without any negligence on his/her part. In case of non-compliance of any order/directives issued at any time and/or violation of the terms and conditions of this consent order, the applicant shall be liable for legal action as per the provisions of the Law.

5. The applicant shall make an application for grant of fresh consent at least 90 days before the date of expiry of this consent order.

6. The issuance of this consent does not convey any property right in either real or personal property or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State laws or regulation.

7. This consent does not authorize or approve the construction of any physical structure or facilities or the undertaking of any work in any natural water course.

8. The applicant shall display this consent granted to him in a prominent place for perusal of the public and inspecting officers of this Board.

9. An inspection book shall be opened and made available to Board's Officers during the visit to the factory.

10. The applicant shall furnish to the visiting officer of the Board any information regarding the construction, installation or operation of the plant or of effluent treatment system / air pollution control system / stack monitoring system any other particulars as may be pertinent to preventing and controlling pollution of Water / Air.

11. The applicant shall display suitable caution board at the place where the effluent is entering into any water-body or any other place to be indicated by the Board, indicating therein that the area into which the effluents are being discharged is not fit for the domestic use/bathing.

12. Storm water shall not be allowed to mix with the trade and/or domestic effluent on the upstream of the terminal manholes where the flow measuring devices will be installed.

13. The applicant shall maintain good house-keeping both within the factory and the premises. All pipes, valves, sewers and drains shall be leak-proof. Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas.

14. The applicant shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems install or used by him to achieve with the term(s) and conditions of the consent.

15. Care should be taken to keep the anaerobic lagoons, if any, biologically active and not utilized as mere stagnation ponds. The anaerobic lagoons should be fed with the required nutrients for effective digestion. Lagoons should be constructed impervious.

16. The utilization of treated effluent on factory's own land, if any, should be completed and there should be no possibility of the effluent gaining access into any drainage channel or other water courses either directly or by overflow.

17. The effluent disposal on land, if any, should be done without creating any nuisance to the surroundings or inundation of the lands at any time.

18. If at any time the disposal of treated effluent on land becomes incomplete or unsatisfactory or create any problem or becomes a matter of dispute, the industry must adopt alternate satisfactory treatment and disposal measures.

19. The sludge from treatment units shall be dried in sludge drying beds and the drained liquid shall be taken to equalization tank.

20. The effluent treatment units and disposal measures shall become operative at the time of commencement of production.

21. The applicant shall provide port holes for sampling the emissions and access platform for carrying out stack sampling and provide electrical outlet points and other arrangements for chimneys/stacks and other sources of emissions so as to collect samples of emission by the Board or the applicant at any time in accordance with the provision of the Acts or Rules made therein.

22. The applicant shall provide all facilities and render required assistance to the Board staff for collection of samples / stack monitoring / inspection.

CONSENT ORDER

23. The applicant shall not change or alter either the quality or quantity or rate of emission or install, replace or alter the air pollution control equipment or change the raw material or manufacturing process resulting in any change in quality and/or quantity of emissions, without the previous written permission of the Board.

24. No control equipments or chimney shall be altered or replaced or as the case may be erected or re-erected except with the previous approval of the Board.

25. The liquid effluent arising out of the operation of the air pollution control equipment shall be treated in the manner so as to meet the standards prescribed by the Board in accordance with the provisions of Water (Prevention and Control of Pollution) Act, 1974 (as amended).

26. The stack monitoring system employed by the applicant shall be opened for inspection to this Board at any time.

27. There shall not be any fugitive or episodal discharge from the premises.

28. In case of such episodal discharge/emissions the industry shall take immediate action to bring down the emission within the limits prescribed by the Board and stop the operation of the plant if required. Report of such accidental discharge /emission shall be brought to the notice of the Board within 24 hours of occurrence.

29. The applicant shall keep the premises of the industrial plant and air pollution control equipments clean and make all hoods, pipes, valves, stacks/chimneys leak proof. The air pollution control equipments, location, inspection chambers, sampling port holes shall be made easily accessible at all times.

30. Any upset condition in any of the plant/plants of the factory which is likely to result in increased effluent discharge/emission of air pollutants and / or result in violation of the standards mentioned shall be reported to the Headquarters and Regional Office of the Board by E-mail within 2 hours of its occurrence.

31. The industry has to ensure that minimum three varieties of trees are planted at the density of not less than 1000 trees per acre. The trees may be planted along boundaries of the industries or industrial premises. This plantation is stipulated over and above the bulk plantation of trees in that area.

32. The solid waste such as sweeping, wastage packages, empty containers residues, sludge including that from air pollution control equipments collected within the premises of the industrial plants shall be disposed off scientifically to the satisfaction of the Board.

33. All solid wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board by :

    i) Land fill in case of inert material, care being taken to ensure that the material does not give rise to leachate which may percolate into ground water or carried away with storm run-off.
    ii) Controlled incineration, wherever possible in case of combustible organic material.
    iii) Composting, in case of bio-degradable material.

34. Any toxic material shall be detoxicated if possible, otherwise be sealed in steel drums and buried in protected areas after obtaining approval of this Board in writing. The detoxication or sealing and burying shall be carried out in the presence of Board's authorized persons only. Letter of authorization shall be obtained for handling and disposal of hazardous wastes.

35. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity of being heard, vary all or any of such condition and thereupon the applicant shall be bound to comply with the conditions so varied.

36. The applicant, his/heirs/legal representatives or assignees shall have no claim whatsoever to the condition or renewal of this consent after the expiry period of this consent.

37. The Board reserves the right to review, impose additional conditions or condition, revoke change or alter the terms and conditions of this consent.

38. Notwithstanding anything contained in this conditional letter of consent, the Board hereby reserves to it the right and power under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 to review any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Act by the Board.

39. The conditions imposed as above shall continue to be in force until revoked under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 and section 21 A of Air (Prevention & Control of Pollution) Act, 1981.

40. In case the consent fee is revised during this period, the industry shall pay the differential fees to the Board (for the remaining years) to keep the consent order in force. If they fail to pay the amount within the period stipulated by the Board the consent order will be revoked without prior notice.

41. The industry shall comply to the conditions stipulated in CTE order issued by Odisha State Pollution Control Board and conditions stipulated in Environmental Clearances issued by MoEF&CC, Govt. of India.

42. The industry shall abide by E(P) Act, 1986 and Rules framed there-under.

43. The Board reserves the right to revoke/refuse consent to operate at any time during period for which consent is granted in case any violation is observed and to modify/ stipulate additional conditions as deemed appropriate.

GENERAL CONDITIONS FOR UNITS WITH INVESTMENT OF MORE THAN Rs.50 CRORES, AND 17 CATEGORIES OF HIGHLY POLLUTING INDUSTRIES (RED A)

1. The applicant shall analyse the effluent / emissions and Ambient Air Quality every month through approved laboratory for the parameters indicated in TABLE- 'B', 'C' & Part -'B' as mentioned in this order and shall furnish the report thereof to the Board on monthly basis.
2. The following information shall be forwarded to the Member Secretary on or before 10th of every month.
   a) Performance / progress of the treatment plant.
   b) Monthly statement of daily discharge of domestic and/or trade effluent.
3. Non-compliance with effluent limitations
   a) If for any reason the applicant does not comply with or is unable to comply with any effluent limitations specified in this consent, the applicant shall immediately notify the consent issuing authority by telephone and provide the consent issuing authority with the following information in writing within 5 days of such notification.
      i) Causes of non-compliance
      ii) A description of the non-compliance discharge including its impact on the receiving waters.
      iii) Anticipated time of continuance of non-compliance if expected to continue or if such condition has been corrected the duration or period of non-compliance.
      iv) Steps taken by the applicant to reduce and eliminate the non-complying discharge and
      v) Steps to be taken by the applicant too prevent the condition of non-compliance.
   b) The applicant shall take all reasonable steps to minimize any adverse impact to natural waters resulting from non-compliance with any effluent limitation specified in this consent including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.
   c) Nothing in this consent shall be construed to relieve the applicant from civil or criminal penalties for non-compliance whether or not such non-compliance is due to factors beyond his control, such as break-down, electric failure, accident or natural disaster.
4. Proper housekeeping shall be maintained inside the factory premises including process areas by a dedicated team.
5. The industry must constitute a team of responsible and technically qualified personnel who will ensure continuous operation of all pollution control devices round the clock (including night hours) and should be in a position to explain the status of operation of the pollution control measures to the inspecting officers of the Board at any point of time. The name of these persons with their contact telephone numbers shall be intimated to the concerned Regional Officer and Head Office of the Board and in case of any change in the team it shall be intimated to the Board immediately.
6. The industry shall engage dedicated qualified manpower to ensure continuous and effective operation of online stack / Ambient Air Quality / Effluent monitoring stations for maintenance of database, real time data transfer to SPCB server, data analysis and co-ordination with concerned personnel of process units for taking corrective measures in case of non-compliances and to respond to the instructions of SPCB in this matter.

E. SPECIAL CONDITIONS:

1) The Port Authority shall obtain Environmental Clearance (EC) from the Competent Authority for any enhancement in cargo handling capacity or change in the configuration of Master Plan or installation of any additional facilities. The Port Authority shall then obtain Consent to Establish of the Board before commissioning any of these activities.
2) Adequate dust suppression and / or extraction system shall be installed at potential dust generating points in ore / mineral handling system to minimize fugitive emission. Material transfer where possibility of dust nuisance is expected shall be done in covered state.
3) All the haulage road, transportation road, transfer, loading and unloading points and stock pipe lines of minerals shall be provided with water sprinklers arrangements to suppress the fugitive dust emissions.
4) The major solid wastes like fines of coal, iron ore, bauxite etc. shall be collected and dumped in such a manner that there shall not be any dust nuisance due to wind. The Port Authority shall make efforts to safe sale these materials for other productive use.
5) The ambient air quality inside the port premises shall conform to the standards prescribed under E(P) Rule, 1986. The Port Authority shall install and operate at least 3 nos. of permanent Ambient Air Quality monitoring stations in consultation with State Pollution Control Board and the results should be furnished to the Board on a monthly basis.
6) To meet with any emergency situation, adequate foam containers should be kept ready with supporting firefighting system and water pipeline.
7) Necessary leakage detection devices with early warning system shall be provided at strategic locations.
8) The unit shall provide adequate stack height to the DG sets as per the following formula:

   Where $H = h+0.2\sqrt{KVA}$
   H = Height of stack attached to the DG in meter
   h = Height of the DG room in meter where DG set is housed
   KVA = capacity of DG Set

9) All the internal roads of the port shall be black topped or concreted and care shall be taken to avoid ruts and potholes.
10) Proper housekeeping shall be maintained by a dedicated team.
11) An effective waste water collection, treatment and disposal mechanism shall be implemented for berth, stack yard, ballast area, mineral handling area, floor washing, ship board, boiler engine room and bilge water and it shall be treated in an adequately designed Effluent Treatment Plant (ETP). The treated water shall be used for dust suppression, water sprinkling at all potential dust generating points. Port shall submit the proposal for installation of ETP with time bound action plan. Till installation of ETP there shall not any discharge of wastewater from port premises to outside.

12) The wastewater generated from vehicle washing shall be treated in the existing ETP and the treated water shall be entirely recycled and reused. In no case this wastewater shall be discharged to outside the port premises.
13) The spillage of bulk items shall be minimized so that its passage to nearby water bodies shall be restricted to avoid turbidity of nearby water bodies.
14) Effective monitoring system shall be enforced to check the release of spillage of oil into the dock waters, estuary and near shore water by ship and also during transportation. Proper collection and treatment facilities should be provided for proper treatment and disposal after meeting the prescribed norm.
15) The monitoring of the marine environment during dredging and post-dredging over a period shall be carried out and the corrective measures shall be taken to conserve the marine environment.
16) In order to safeguard the health of the marine ecology of port area, critical locations are to be carefully selected and periodic monitoring with respect to water quality, sediment quality and fauna shall be carried out.
17) Domestic effluent generated from colony and port area shall be treated in the existing Sewage Treatment Plant (STP) and treated waste water shall meet prescribed standard mentioned in Section-A of this order and used for gardening.
18) The surface run off from open stack yards and mineral handling area shall be collected through dedicated drainage network with settling tanks at all mineral stack ward areas and adequately treated to meet prescribed standard for inland surface water before discharge to outside during monsoon or heavy rains only.
19) The sea water in the harbour area shall meet the water quality criteria for SW-IV class of sea water as given below:

a)	pH	:	6.5-9.0
b)	Dissolved oxygen	:	3.0 mg/l or 40% of saturation value whichever is high.
c)	Colour and odour	:	No visible colour or offensive odour
d)	Floating matter, oil and grease and scum including petroleum product	:	10 mg/l
e)	Fecal coliform	:	500 MPN/100 ml
f)	BOD (3 days) at 28^{0}C	:	5 mg/l

20) The waste oil collected from the ships shall be properly stored so that, no spillage occurs.
21) Utmost care shall be taken during operational period so that there shall be no threat to Bhittarkanika and Gahirmatha sanctuary which are otherwise ecologically highly sensitive.
22) Rain water harvesting shall be followed by utilizing the rain water collecting from the roof top of the administrative buildings for recharging of ground water within the premises as per the concept and practices prescribed by CPCB.

23) The port shall obtain authorization for disposal of all hazardous wastes under The Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016.
24) All compliance shall be made with respect to Manufacture, Storage and Import of Hazardous Chemical Rule, 1989 and amended thereafter and other provisions of the Environment Protection Act, 1986.
25) The unit shall abide the provisions of Environment (Protection) Act, 1986 and Rules framed thereunder.
26) In case the consent fees is revised upward during this period, the industry shall pay the differential fees to the Board (for the period & remaining years) to keep the consent order in force. If they fail to pay the amount within the period stipulated by the Board the consent order will be revoked without prior notice.
27) The port authority shall apply for consent to establish and environmental clearance for any expansion / enhancement of capacity of export and import etc.
28) The Board may impose further conditions or modify the conditions stipulated in this order during installation and / or at the time of renewal of consent to operate and may revoke this clearance in case the stipulated conditions are not implemented and / or any information suppressed in the application form.

To

The Chief Executive Officer,
The Dhamra Port Company Limited,
At/Po-Dosinga, Via- Dhamra-756171,
Dist-Bhadrak, Odisha

SR. ENV. ENGINEER (L-I)
STATE POLLUTION CONTROL BOARD, ODISHA

Memo No. 4219 /Dt. 24.04.2020 /

Copy forwarded to:

i) Regional Officer, SPC Board, **Balasore**
ii) District Collector, **Bhadrak**
iii) D.F.O., **Bhadrak**
iv) SES, Central Laboratory, SPC Board, Bhubaneswar
v) H.W.M. Cell, (Head Office)

SR. ENV. ENGINEER (L-I)
STATE POLLUTION CONTROL BOARD, ODISHA

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENT POLLUTANTS

Annexure-I

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS PART –A : EFFLUENTS

Sl.No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Costal Areas
		(a)	(b)	(c)	(d)
1.	Colour & odour	Colourless/Odourless as far as practible	--	See 6 of Annex-1	See 6 of Annex-1
2.	Suspended Solids (mg/l)	100	600	200	a. For process wastewater – 100 b. For cooling water effluent 10% above total suspended matter of influent.
3.	Particular size of SS	Shall pass 850	--	--	--
5.	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
6.	Temperature	Shall not exceed 5°C above the receiving water temperature	--	--	Shall not exceed 5°C above the receiving water temperature
7.	Oil & Grease mg/l max.	10	20	10	20
8.	Total residual chlorine	1.0	--	--	1.0
9.	Ammonical nitrogen (as N) mg/l max.	50	50	--	50
10.	Total Kajeldahl nitrogen (as NH_3) mg/l max.	100	--	--	100
11.	Free ammonia (as NH_3) mg/l max.	5.0	--	--	5.0
12.	Biochemical Oxygen Demand (5 days at (20°C) mg/l max.	30	350	100	100
13.	Chemical Oxygen Demand, mg/l max.	250	--	--	250
14.	Arsenic (as As) mg/l max.	0.2	0.2	0.2	0.2
15.	Mercury (as Hg) mg/l max.	0.01	0.01	--	0.001

CONSENT ORDER

Sl.No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Costal Areas
		(a)	(b)	(c)	(d)
16.	Lead (as pb) mg/l max.	01.	1.0	--	2.0
17.	Cardmium (as Cd) mg/l max.	2.0	1.0	--	2.0
18.	Hexavalent Chromium (as Cr + 6) mg/l max.	0.1	2.0	--	1.0
19.	Total Chromium (as Cr) mg/l max.	2.0	2.0	--	2.0
20.	Copper (as Cu) mg/l max.	3.0	3.0	--	3.0
21.	Zinc (as Zn) mg/l max.	5.0	15	--	15
22.	Selenium (as Sc) mg/l max.	0.05	0.05	--	0.05
23.	Nickel (as Nil) mg/l max.	3.0	3.0	--	5.0
24.	Cyanide (as CN) mg/l max.	0.2	2.0	0.2	0.02
25.	Fluoride (as F) mg/l max.	2.0	15	--	15
26.	Dissolved Phosphates (as P) mg/l max.	5.0	--	--	--
27.	Sulphide (as S) mg/l max.	2.0	--	--	5.0
28.	Phennolic compounds as (C_6H_5OH) mg/l max.	1.0	5.0	--	5.0
29.	Radioactive materials a. Alpha emitter micro curle/ml. b. Beta emitter micro curle/ml.	 10^7 10^6	 10^7 10^6	 10^6 10^7	 10^7 10^6
30.	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
31	Manganese (as Mn)	2 mg/l	2 mg/l	--	2 mg/l
32.	Iron (Fe)	3 mg/l	3 mg/l	--	3 mg/l
33.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	--	0.2 mg/l
34.	Nitrate Nitrogen	10 mg/l	--	--	20 mg/l

CONSENT ORDER

Annexure-II

NATIONAL AMBIENT AIR QUALITY STANDARDS

Sl. No.	Pollutants	Time Weighed Average	Concentrate of Ambient Air		
			Industrial Residential, Rural and other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1.	Sulphur Dioxide (SO_2), µg/m³	Annual * 24 Hours **	50 80	20 80	-Improved west and Gaeke - Ultraviolet fluorescence
2.	Nitrogen Dioxide (NO_2), µg/m³	Annual * 24 Hours **	40 80	30 80	- Modified Jacob & Hochheiser (Na-Arsenite) - Chemiluminescence
3.	Particulate Matter (size less than 10µm) or PM_{10}µg/m³	Annual * 24 Hours **	60 100	60 100	-Gravimetric - TOEM - Beta Attenuation
4.	Particulate Matter (size less than 2.5µm) or $PM_{2.5}$ µg/m³	Annual * 24 Hours **	40 60	40 60	-Gravimetric - TOEM - Beta Attenuation
5.	Ozone (O_3) µg/m³	8 Hours ** 1 Hours **	100 180	100 180	- UV Photometric - Chemiluminescence - Chemical Method
6.	Lead (Pb) µg/m³	Annual * 24 Hours **	0.50 1.0	0.50 1.0	-AAS/ICP method after sampling on EMP 2000 or equivalent filter paper. - ED-XRF using Teflon filter
7.	Carbon Monoxide (CO) mg/m³	8 Hours ** 1 Hours **	02 04	02 04	- Non Dispersive Infra Red (NDIR) Spectroscopy
8.	Ammonia (NH_3) µg/m³	Annual* 24 Hours**	100 400	100 400	-Chemiluminescence - Indophenol Blue Method
9.	Benzene (C_6H_6) µg/m³	Annul *	05	05	-Gas Chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10.	Benzo (a) Pyrene (BaP)- Particulate phase only, mg/m³	Annual*	01	01	-Solvent extraction followed by HPLC/GC analysis
11.	Arsenic (As), mg/m³	Annual*	06	06	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12.	Nickel (Ni), mg/m³	Annual*	20	20	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

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

** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year, 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

ANNEXURE-III

MONTHLY ENVIRONMENT MONITORING REPORT

OCTOBER- 2020

Directed by

THE DHAMRA PORT COMPANY LIMITED

adani
Ports and Logistics

AT : DOSINGA, PO : DHAMRA
DIST- BHADRAK, PIN : 756171 ODISHA

Conducted by

M/s. Mitra S. K. Private Limited

MSK
TESTING • INSPECTION

Shrachi Centre (5th Floor)
74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700016 (West Bengal)

Mitra S. K. Private Limited

N-5/100, Ground Floor
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MSK TESTING & INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001116
Type of Sample	Ambient Air Sample
Sampling Location	Colony
Sampling Done by	Mr. Kunja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_x ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.10.2020	47.0	27.0	7.0	21.0	0.55	16.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
05.10.2020	49.0	26.0	6.5	23.0	0.61	17.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.10.2020	48.0	30.0	7.2	19.0	0.52	18.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.10.2020	45.6	25.0	6.8	22.0	0.48	16.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.10.2020	47.2	25.0	6.6	26.0	0.63	17.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
19.10.2020	46.0	24.1	7.1	21.0	0.58	15.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.10.2020	50.5	29.0	6.9	20.0	0.56	17.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
26.10.2020	46.4	25.0	6.3	19.0	0.52	18.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.10.2020	51.0	26.0	7.7	26.0	0.53	17.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	47.86	26.34	6.90	21.89	0.55	17.03	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi AAQ Standard	100	60	80	80	4	400	180	1	20	6	5	1
Time Weighted Average (hrs.)	24	24	24	24	1	24	1	24	Annual	Annual	Annual	Annual
TEST METHOD	IS 5182: Part 23:2006 (Reaff. 2012	IS 5182: Part 24:2019	IS 5182 : Part 2 :2001 (Reaff .2012	IS 5182 : Part 6 :2006 (Reaff .2012)	IS 5182 : Part 10 :1999 (Reaff.2014)	IS 5182: Part 25:2018	IS 5182: Part 09:1974	EPA - IO3.4 June, 1999	EPA - IO3.4June,1999	EPA - IO3.4June,1999	IS:5182 (Part-11):2006 Reaff,2012	IS:5182 (Part-12):2004 Reaff,: 2014

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

S. Kaunga
Prepared By –

Checked By-

MITRA S.K. PRIVATE LTD. BBSR

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001116**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Kanakprasad**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.10.2020	54.0	25.0	7.1	23.0	0.57	17.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
05.10.2020	52.4	24.0	7.2	22.0	0.52	20.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.10.2020	50.0	28.0	6.6	24.0	0.57	18.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.10.2020	56.0	22.7	6.9	19.0	0.61	19.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.10.2020	49.0	24.1	6.4	25.0	0.53	18.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
19.10.2020	46.0	26.0	7.5	22.0	0.46	17.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.10.2020	51.0	23.2	6.6	26.0	0.57	19.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
26.10.2020	54.6	30.1	6.3	22.0	0.50	17.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.10.2020	57.0	31.0	7.0	24.0	0.51	20.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**52.22**	**26.01**	**6.84**	**23.00**	**0.54**	**18.60**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gazt. Notification

S. Karungo
Prepared By –

Checked By –

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001116**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near BMH**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.10.2020	59.0	29.0	7.4	24.0	0.54	19.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
05.10.2020	60.0	27.5	7.2	21.0	0.56	17.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.10.2020	55.0	30.0	6.7	25.0	0.59	17.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.10.2020	54.0	28.0	7.8	19.2	0.54	18.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.10.2020	60.0	29.0	7.5	23.0	0.57	15.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
19.10.2020	58.0	26.0	8.1	20.3	0.66	17.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.10.2020	60.0	27.0	8.3	26.0	0.57	20.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
26.10.2020	61.0	25.0	7.7	27.0	0.61	19.9	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.10.2020	63.0	30.0	7.6	25.0	0.48	22.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**58.89**	**27.94**	**7.59**	**23.39**	**0.57**	**18.66**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001116**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Jetty**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_x ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.10.2020	79.0	37.0	8.4	22.0	0.71	21.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
05.10.2020	76.0	36.0	7.6	19.0	0.64	16.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.10.2020	75.2	40.0	6.9	23.0	0.58	18.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.10.2020	79.0	38.0	7.5	19.5	0.53	22.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.10.2020	78.1	37.0	8.4	21.0	0.64	19.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
19.10.2020	80.0	41.0	8.2	18.9	0.55	20.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.10.2020	81.7	38.0	7.6	24.0	0.57	21.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
26.10.2020	80.0	37.1	7.2	20.0	0.52	19.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.10.2020	82.4	39.0	6.9	25.0	0.55	20.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**79.04**	**38.12**	**7.63**	**21.38**	**0.59**	**19.93**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification

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MSK TESTING★INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001116**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Dosinga**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.10.2020	37.0	24.0	7.0	21.0	0.61	16.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
05.10.2020	38.4	23.5	6.9	20.5	0.64	19.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.10.2020	36.0	26.0	7.2	19.0	0.54	22.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.10.2020	40.1	22.0	6.8	24.0	0.49	18.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.10.2020	39.0	27.0	7.5	23.0	0.52	24.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
19.10.2020	42.0	25.0	6.9	27.0	0.58	20.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.10.2020	37.0	24.3	6.6	24.0	0.51	17.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
26.10.2020	36.8	26.1	7.1	26.0	0.53	25.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.10.2020	42.0	30.0	7.4	22.0	0.58	15.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**38.70**	**25.32**	**7.04**	**22.94**	**0.56**	**19.9**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

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MSK TESTING ★ INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001116**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near Bhitarkanika**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.10.2020	42.1	31.4	6.3	18.0	0.63	15.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
05.10.2020	44.0	29.0	7.0	23.0	0.57	20.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.10.2020	41.0	26.1	6.8	22.0	0.55	19.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.10.2020	45.0	30.0	7.1	26.0	0.53	18.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.10.2020	42.1	29.0	6.6	24.0	0.52	17.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
19.10.2020	45.0	30.2	6.9	25.0	0.57	16.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.10.2020	47.0	28.0	6.8	21.0	0.55	19.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
26.10.2020	43.1	29.0	6.9	22.0	0.52	17.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.10.2020	44.0	32.0	7.2	24.0	0.59	21.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**43.70**	**29.41**	**6.84**	**22.78**	**0.56**	**18.20**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,-2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By - S. Kanungo

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/800
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01166
Sample Description : VOC Monitoring

ANALYSIS

Sl. No	Date of Monitoring	Sampling Location	Method of Analysis	Parameter	Result
1.	02.10.2020	Jetty	NIOSH-1501	Volatile Organic Compound (VOC in mg/m^3)	<0.008
2.	02.10.2020	Wagon Tippler			<0.008
3.	05.10.2020	Near Silo			<0.008
4.	05.10.2020	Transfer Point			<0.008
5.	06.10.2020	BMH Workshop			<0.008
6.	06.10.2020	Steel Yard			<0.008
7.	07.10.2020	FCC Shed			<0.008
8.	07.10.2020	SS 6 Office			<0.008

S. Kaunge
Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/801
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01170
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day L Time dB(A)			Night Time L dB(A)		
			MAX	MIN	AVG.	MAX	MIN	AVG.
1.	02.10.2020	Colony	51.4	44.0	48.2	42.8	37.0	38.5
2.	06.10.2020	Kanakprasad	54.8	45.0	50.6	45.5	38.1	40.8
3.	07.10.2020	Near BMH	70.1	59.2	64.8	54.7	42.2	45.3
4.	09.10.2020	Jetty	73.0	67.8	71.3	64.8	51.5	59.8
5.	13.10.2020	Dosinga	52.5	43.2	49.5	43.2	36.0	38.7
6.	15.10.2020	Near Bhitarkanika	48.2	40.8	43.8	40.7	35.4	37.3

Noise Limit as per CPCB

Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time	NOTE :
Industrial Area	75	70	Day Time : 06.00 Hr.-22.00 Hr. Night Time:22.00 Hr.-06.00 Hr.
Commercial Area	65	55	
Residential Area	55	45	
Silence Zone	50	40	

S. Kaunar
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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/802
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01171
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg Leq dB(A)
1.	01.10.2020	Stack Yard	89.2	64.2	76.6
2.	03.10.2020	Wagon Tippler	89.3	78.1	83.7
3.	05.10.2020	Near Silo	88.0	77.3	82.6
4.	08.10.2020	Near Stacker & Reclaimer	88.6	55.2	70.2
5.	10.10.2020	Project Area	89.4	79.1	83.4
6.	19.10.2020	Transfer Point	85.5	71.8	76.8
7.	12.10.2020	Workshop	88.2	59.8	73.7
8.	14.10.2020	Steel Yard	85.6	92.3	89.5
9.	16.10.2020	FCC Shed	78.3	65.9	72.4
10.	17.10.2020	Road (MCC 1 – PSS)	87.2	65.5	81.3

OSHA'S Permissible Noise Exposure Limits	
Noise Level	**Exposure Limit**
90 dBA	**8.0 hours**

S. Kanungo
Report Prepared by

For Mitra S.K. Private Limited

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MSK TESTING & INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/803
Date : 01.11.2020
Sample No. : MSKGL/FD/2020-21/10/00185
Date of sampling : 15.10.2020
Sampling Description : Ground Water (Peizometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.33
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	10.62
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	64.64
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	79.18
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	420.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	180.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.39
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	192.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)

MSK TESTING • INSPECTION

Ref. No. BBS/803

Date- 01.11.2020

31	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
32.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
33.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
34.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
35.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
36.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
37.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
38.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Water Level – 9.90 Feet

S. Kaungo
Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED BBSR

Mitra S. K. Private Limited

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN : U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, 756171 ODISHA

Report No. : BBS/804
Date : 01.11.2020
Sample No. : MSKGL/FD/2020-21/10/00186
Date of sampling : 15.10.2020
Sampling Description : Ground Water (Peizometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.43
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	10.86
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	56.56
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	69.28
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	385.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	185.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.39
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	174.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)

MSK TESTING • INSPECTION

Ref. No. BBS/804

Date- 01.11.2020

31	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
32.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
33.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
34.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
35.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
36.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
37.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
38.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Water Level – 11.64 Feet

S. Kamngo
Report Prepared By:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED BBSR

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/805
Date : 01.11.2020
Sample No. : MSKGL/FD/2020-21/10/00186
Date of sampling : 15.10.2020
Sampling Description : Ground Water (Peizometric)
Sampling Location : Running Room
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.68
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	10.48
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	48.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	79.18
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	450.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	180.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	21.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	188.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)

MSK TESTING • INSPECTION

Ref. No. BBS/805 **Date- 01.11.2020**

31	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
32.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
33.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
34.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
35.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
36.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
37.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
38.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kaungo
Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LTD. BBSR

Mitra S. K. Private Limited
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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/806
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/00510
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 05.10.2020

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.28	7.34
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	44.0	9.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	5.2	4.4
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	20.0	16.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	16.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	8.6	<0.1
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	14.0	13.0
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2200.0	90.0

S. Karunya
Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

MITRA S.K. PRIVATE LTD. BBSR

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/807
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/00512
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 05.10.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.46	7.04
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	116.0	<2.5
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	80.0	4.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	315.0	16.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	11.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	23.0	<0.1
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	28.0	3.2
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2400.0	90.0

S. Kaungo
Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

MITRA S.K. PRIVATE BBSR

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/808
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/20/01110
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 20.10.2020

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.13	7.50
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	44.0	4.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	66.0	8.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	272.0	32.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	4.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	18.0	<0.1
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	25.0	3.2
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	3000.0	80.0

S. Kanungo
Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

MITRA S.K. PRIVATE LTD. BBSR

Mitra S. K. Private Limited

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[CIN : U51909WB1956PTC023037]

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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/809
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01112
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 20.10.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.18	7.53
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	36.0	<2.5
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	37.0	5.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	148.0	20.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	14.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	20.0	<0.1
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	26.0	2.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2100.0	95.0

S. Kanungo
Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

BBSF

Mitra S. K. Private Limited

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[CIN : U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/810
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/20/01114
Sample Description : EFFLUENT WATER
Sampling Location : STP 25 KLD
Date of sampling : 20.10.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.48	7.06
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	80.0	4.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	29.0	6.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	120.0	24.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	15.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	0.56	<0.1
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	12.0	5.5
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2100.0	360.0

S. Kanungo
Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

MITRA S.K. PRIVATE LTD. BBSR

Mitra S. K. Private Limited
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[CIN : U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/811
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/00515
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 05.10.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.59
2.	Aluminium (as Al)	mg/kg	EPA 6010D	7600.0
3.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1654.0
4.	Copper (as Cu)	mg/kg	EPA 6010D	25.0
5.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	34.0
6.	Manganese (as Mn)	mg/kg	EPA 6010D	486.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	687.0
8.	Lead (as Pb)	mg/kg	EPA 6010D	14.0
9	Nickel (as Ni)	mg/kg	EPA 6010D	32.0
10	Total Chromium (as Cr)	mg/kg	EPA 6010D	53.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1417.0
12.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
13.	Sand	%	TPM/MSK/P&E/1/36A	28.0
14.	Silt	%	TPM/MSK/P&E/1/36A	32.0
15.	Texture	None	TPM/MSK/P&E/1/36A	Clay
16.	Clay	%	TPM/MSK/P&E/1/36A	40.0

MSK TESTING & INSPECTION

Ref. No. BBS/811

Date- 01.11.2020

17.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	394.0
18.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	627.0
19.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.4
20.	Zinc (as Zn)	mg/kg	EPA 6010D	38.0
21.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
22.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1700.0
23.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	13.0
26.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.3
27.	Moisture content	%	Lab Method	42.0
28.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	515.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1470
2.	Total count (Phytobenthos)	50 mg wet sediment	390
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	----	1.79
5.	Major Species (phytobenthos)	----	*Navicula closterium, Biddulphia mobilensis, Coscinodiscus marginatus*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-30,Bivalvia-18
8.	Total no. of species encountered (Fauna)	Nos.	32
9.	Total fauna (Fauna)	per m^3	190

S. Kaunge

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

MITRA S.K. PRIVATE LIMITED BBSR

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/811
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/00514
Sample Description : Sea Sediment
Sampling Location : Dredging Source Site
Date of sampling : 05.10.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.93
2.	Aluminium (as Al)	mg/kg	EPA 6010D	7452.0
3.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1738.0
4.	Copper (as Cu)	mg/kg	EPA 6010D	23.0
5.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	37.0
6.	Manganese (as Mn)	mg/kg	EPA 6010D	469.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	700.0
8.	Lead (as Pb)	mg/kg	EPA 6010D	15.0
9	Nickel (as Ni)	mg/kg	EPA 6010D	30.0
10	Total Chromium (as Cr)	mg/kg	EPA 6010D	51.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1436.0
12.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
13.	Sand	%	TPM/MSK/P&E/1/36A	38.0
14.	Silt	%	TPM/MSK/P&E/1/36A	26.0
15.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
16.	Clay	%	TPM/MSK/P&E/1/36A	36.0

MSK TESTING • INSPECTION

Ref. No. BBS/811

Date- 01.11.2020

17.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	314.0
18.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	560.0
19.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.2
20.	Zinc (as Zn)	mg/kg	EPA 6010D	40.0
21.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	1.0
22.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1612.0
23.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	11.0
26.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	3.6
27.	Moisture content	%	Lab Method	34.0
28.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	532.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1730
2.	Total count (Phytobenthos)	50 mg wet sediment	310
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	----	1.83
5.	Major Species (phytobenthos)	----	*Navicula closterium, Biddulphia mobilensis, Gyrosigma*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-44,Bivalvia-19
8.	Total no. of species encountered (Fauna)	Nos.	40
9.	Total fauna (Fauna)	per m^3	180

S. Kaungo

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/812
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01138
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 18.10.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	8.03
2.	Aluminium (as Al)	mg/kg	EPA 6010D	7972.0
3.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1800.0
4.	Copper (as Cu)	mg/kg	EPA 6010D	12.0
5.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	50.0
6.	Manganese (as Mn)	mg/kg	EPA 6010D	407.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	499.0
8.	Lead (as Pb)	mg/kg	EPA 6010D	7.0
9	Nickel (as Ni)	mg/kg	EPA 6010D	18.0
10	Total Chromium (as Cr)	mg/kg	EPA 6010D	31.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1810.0
12.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
13.	Sand	%	TPM/MSK/P&E/1/36A	49.0
14.	Silt	%	TPM/MSK/P&E/1/36A	28.0
15.	Texture	None	TPM/MSK/P&E/1/36A	Loam
16.	Clay	%	TPM/MSK/P&E/1/36A	23.0

MSK TESTING • INSPECTION

Ref. No. BBS/812

Date- 01.11.2020

17.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	260.0
18.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	330.0
19.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.5
20.	Zinc (as Zn)	mg/kg	EPA 6010D	27.0
21.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
22.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1641.0
23.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	18.0
26.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	5.9
27.	Moisture content	%	Lab Method	28.0
28.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	224.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1520
2.	Total count (Phytobenthos)	50 mg wet sediment	325
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	----	1.54
5.	Major Species (phytobenthos)	----	*Biddulphia mobilensis, Gyrosigma* sp., *Coscinodiscus marginatus*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-52,Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	30
9.	Total fauna (Fauna)	per m^2	210

S. Kaunge

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

MITRA S.K. PRIVATE LTD. BESR

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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/812
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01139
Sample Description : Sea Sediment
Sampling Location : Dredging Source Site
Date of sampling : 18.10.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.54
2.	Aluminium (as Al)	mg/kg	EPA 6010D	8100.0
3.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1677.0
4.	Copper (as Cu)	mg/kg	EPA 6010D	25.0
5.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	31.0
6.	Manganese (as Mn)	mg/kg	EPA 6010D	431.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	676.0
8.	Lead (as Pb)	mg/kg	EPA 6010D	14.0
9	Nickel (as Ni)	mg/kg	EPA 6010D	36.0
10	Total Chromium (as Cr)	mg/kg	EPA 6010D	64.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1489.0
12.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
13.	Sand	%	TPM/MSK/P&E/1/36A	31.0
14.	Silt	%	TPM/MSK/P&E/1/36A	27.0
15.	Texture	None	TPM/MSK/P&E/1/36A	Clay
16.	Clay	%	TPM/MSK/P&E/1/36A	42.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BBS/812

Date- 01.11.2020

17.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	298.0
18.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	655.0
19.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.1
20.	Zinc (as Zn)	mg/kg	EPA 6010D	40.0
21.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
22.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1735.0
23.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	10.0
26.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	3.3
27.	Moisture content	%	Lab Method	38.0
28.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	459.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1675
2.	Total count (Phytobenthos)	50 mg wet sediment	330
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	----	1.46
5.	Major Species (phytobenthos)	----	*Biddulphia mobilensis, Gyrosigma* sp.
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-51,Bivalvia-26
8.	Total no. of species encountered (Fauna)	Nos.	41
9.	Total fauna (Fauna)	per m^3	184

S. Kaungo

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

MITRA S.K. PRIVATE LIMITED BBSR

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/813
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01110
Sample Description : Indoor Air Quality
Date of sampling : 13.10.2020
Sampling Location : SS-6 Building 2nd Floor

ANALYSIS RESULT

Sl. No	POLLUTANT	UNIT	RESULT	LIMIT AS PER OSHA	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10μm)	mg/m^3	0.028	15	IS: 5182 (Part-23)
2.	Particulate Matter (<2.5μm)	mg/m^3	0.017	5	TPM/MSK/ENV(AP)/01/03
3.	Temperature	Deg C	29-33	---	IS: 3025 (Part-9)
4.	Humidity	%	65-72	---	By Calculation
5.	VOC	mg/m^3	<0.008	---	NIOSH-1501
6.	Carbon monoxide (CO)	ppm	0.57	50	IS: 5182 (Part-10)
7.	Oxygen (O_2)	%	18.2	---	IS: 13270:1992
8.	Carbon-Dioxide (CO_2)	ppm	530.0	5000	IS: 5182 (Part-10)
9.	HCHO	ppm	0.24	0.75	NIOSH-2016

Air Exposure Plates for Microbial Count (Bacteria)

Media used:- Plate Count Agar (Total Bacterial Count)
Exposure time:- 30 mins
Incubation temp/time:- 30^0C/72 hrs
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	42	31	23	25	37
Total count	42	31	23	25	37

Air Exposure Plates Count for Fungi

Media used:- Chloramphenicol Yeast (Glucose) (Yeast & Mould Count)
Exposure time:- 30 mins
Incubation temp/time:- 25^0C/5 days
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	Yeast - 0 Mould – 10	Yeast -2 Mould – 6	Yeast - 0 Mould – 8	Yeast - 0 Mould – 4	Yeast - 3 Mould – 6
Total count	10	8	8	4	9

Report Prepared by: S. Kanungo

For Mitra S.K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/814
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01115
Sample Description : Indoor Air Quality
Date of sampling : 13.10.2020
Sampling Location : SS-6 Building 3rd Floor

ANALYSIS RESULT

Sl. No	POLLUTANT	UNIT	RESULT	LIMIT AS PER OSHA	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10µm)	mg/m^3	0.025	15	IS: 5182 (Part-23)
2.	Particulate Matter (<2.5µm)	mg/m^3	0.015	5	TPM/MSK/ENV(AP)/01/03
3.	Temperature	Deg C	29-33	---	IS: 3025 (Part-9)
4.	Humidity	%	65-72	---	By Calculation
5.	VOC	mg/m^3	<0.008	---	NIOSH-1501
6.	Carbon monoxide (CO)	ppm	0.45	50	IS: 5182 (Part-10)
7.	Oxygen (O_2)	%	18.0	---	IS: 13270:1992
8.	Carbon-Dioxide (CO_2)	ppm	520.0	5000	IS: 5182 (Part-10)
9.	HCHO	ppm	0.24	0.75	NIOSH-2016

Air Exposure Plates for Microbial Count (Bacteria)

Media used:- Plate Count Agar (Total Bacterial Count)
Exposure time:- 30 mins
Incubation temp/time:- 30^0C/72 hrs
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	30	22	39	30	18
Total count	30	22	39	30	18

Air Exposure Plates Count for Fungi

Media used:- Chloramphenicol Yeast (Glucose) (Yeast & Mould Count)
Exposure time:- 30 mins
Incubation temp/time:- 25^0C/5 days
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	Yeast - 0 Mould – 4	Yeast -0 Mould – 7	Yeast - 0 Mould – 12	Yeast - 0 Mould – 10	Yeast - 0 Mould – 5
Total count	10	7	12	10	5

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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/815
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01120
Sample Description : Indoor Air Quality
Date of sampling : 14.10.2020
Sampling Location : Site Office

ANALYSIS RESULT

Sl. No	POLLUTANT	UNIT	RESULT	LIMIT AS PER OSHA	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10µm)	mg/m^3	0.036	15	IS: 5182 (Part-23)
2.	Particulate Matter (<2.5µm)	mg/m^3	0.021	5	TPM/MSK/ENV(AP)/01/03
3.	Temperature	Deg C	28-33	---	IS: 3025 (Part-9)
4.	Humidity	%	70-74	---	By Calculation
5.	VOC	mg/m^3	<0.008	---	NIOSH-1501
6.	Carbon monoxide (CO)	ppm	0.66	50	IS: 5182 (Part-10)
7.	Oxygen (O_2)	%	18.4	---	IS: 13270:1992
8.	Carbon-Dioxide (CO_2)	ppm	540.0	5000	IS: 5182 (Part-10)
9.	HCHO	ppm	0.24	0.75	NIOSH-2016

Air Exposure Plates for Microbial Count (Bacteria)

Media used:- Plate Count Agar (Total Bacterial Count)
Exposure time:- 30 mins
Incubation temp/time:- 30^0C/72 hrs
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	21	25	35	29	24
Total count	21	25	35	29	24

Air Exposure Plates Count for Fungi

Media used:- Chloramphenicol Yeast (Glucose) (Yeast & Mould Count)
Exposure time:- 30 mins
Incubation temp/time:- 25^0C/5 days
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	Yeast - 7 Mould – 4	Yeast -0 Mould – 5	Yeast - 0 Mould – 1	Yeast - 0 Mould – 8	Yeast - 2 Mould – 4
Total count	11	5	1	8	5

Report Prepared by: S. Kanungo

For Mitra S.K. Private Limited

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[CIN : U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/816
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01125
Sample Description : Indoor Air Quality
Date of sampling : 14.10.2020
Sampling Location : MCC

ANALYSIS RESULT

Sl. No	POLLUTANT	UNIT	RESULT	LIMIT AS PER OSHA	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10µm)	mg/m^3	0.026	15	IS: 5182 (Part-23)
2.	Particulate Matter (<2.5µm)	mg/m^3	0.017	5	TPM/MSK/ENV(AP)/01/03
3.	Temperature	Deg C	28-33	---	IS: 3025 (Part-9)
4.	Humidity	%	70-74	---	By Calculation
5.	VOC	mg/m^3	<0.008	---	NIOSH-1501
6.	Carbon monoxide (CO)	ppm	0.52	50	IS: 5182 (Part-10)
7.	Oxygen (O_2)	%	18.6	---	IS: 13270:1992
8.	Carbon-Dioxide (CO_2)	ppm	515.0	5000	IS: 5182 (Part-10)
9.	HCHO	ppm	0.24	0.75	NIOSH-2016

Air Exposure Plates for Microbial Count (Bacteria)

Media used:- Plate Count Agar (Total Bacterial Count)
Exposure time:- 30 mins
Incubation temp/time:- 30^0C/72 hrs
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	21	33	40	28	37
Total count	21	33	40	28	37

Air Exposure Plates Count for Fungi

Media used:- Chloramphenicol Yeast (Glucose) (Yeast & Mould Count)
Exposure time:- 30 mins
Incubation temp/time:- 25^0C/5 days
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	Yeast - 0 Mould – 3	Yeast -0 Mould – 7	Yeast - 0 Mould – 11	Yeast - 0 Mould – 6	Yeast - 0 Mould – 7
Total count	3	7	11	6	7

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN : U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/817
Date : 01.11.2020
Sample No. : MSKGL/ED/2020-21/10/01130
Sample Description : Indoor Air Quality
Date of sampling : 15.10.2020
Sampling Location : PSS

ANALYSIS RESULT

Sl. No	POLLUTANT	UNIT	RESULT	LIMIT AS PER OSHA	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10μm)	mg/m^3	0.041	15	IS: 5182 (Part-23)
2.	Particulate Matter (<2.5μm)	mg/m^3	0.023	5	TPM/MSK/ENV(AP)/01/03
3.	Temperature	Deg C	26-31	---	IS: 3025 (Part-9)
4.	Humidity	%	69-75	---	By Calculation
5.	VOC	mg/m^3	<0.008	---	NIOSH-1501
6.	Carbon monoxide (CO)	ppm	0.58	50	IS: 5182 (Part-10)
7.	Oxygen (O_2)	%	18.2	---	IS: 13270:1992
8.	Carbon-Dioxide (CO_2)	ppm	530.0	5000	IS: 5182 (Part-10)
9.	HCHO	ppm	0.24	0.75	NIOSH-2016

Air Exposure Plates for Microbial Count (Bacteria)

Media used:- Plate Count Agar (Total Bacterial Count)
Exposure time:- 30 mins
Incubation temp/time:- 30^0C/72 hrs
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	44	21	32	38	30
Total count	44	21	32	38	30

Air Exposure Plates Count for Fungi

Media used:- Chloramphenicol Yeast (Glucose) (Yeast & Mould Count)
Exposure time:- 30 mins
Incubation temp/time:- 25^0C/5 days
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	Yeast - 4 Mould – 3	Yeast -0 Mould – 9	Yeast - 0 Mould – 18	Yeast - 0 Mould – 5	Yeast - 0 Mould – 3
Total count	7	9	18	5	3

Report Prepared by: S. Kaungo

For Mitra S.K. Private Limited

Authorized Signatory

BBSP

MONTHLY ENVIRONMENT MONITORING REPORT

November- 2020

Directed by

THE DHAMRA PORT COMPANY LIMITED

adani
Ports and Logistics

AT : DOSINGA, PO : DHAMRA
DIST- BHADRAK, PIN : 756171 ODISHA

Conducted by

M/s. Mitra S. K. Private Limited

MSK
TESTING • INSPECTION

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Kolkata – 700016 (West Bengal)

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[CIN : U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001260**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Colony**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
04.11.2020	52.0	28.0	6.2	18.8	0.49	16.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.11.2020	54.0	26.1	7.5	25.8	0.67	17.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.11.2020	47.0	28.5	6.4	22.4	0.61	18.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.11.2020	48.0	29.0	7.2	23.1	0.59	16.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.11.2020	45.3	27.1	6.8	24.6	0.69	17.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.11.2020	50.8	26.6	6.1	19.5	0.47	15.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.11.2020	53.4	31.0	7.3	26.1	0.55	17.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.11.2020	55.0	27.0	7.0	25.3	0.62	18.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**50.68**	**27.91**	**6.81**	**23.20**	**0.58**	**17.03**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff. 2012**	**IS 5182 : Part 6 :2006 (Reaff. 2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182(Part-11):2006 Reaff.2012**	**IS:5182(Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gazt. Notification

S. Kaunge
Prepared By –

MITRA S.K. PRIVATE LIMITED

Checked By-

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001260**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Kanakprasad**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
04.11.2020	54.8	30.2	7.6	27.5	0.68	24.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.11.2020	55.2	25.6	6.1	17.8	0.42	15.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.11.2020	57.1	28.4	7.2	24.6	0.59	21.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.11.2020	52.2	23.5	6.3	20.5	0.48	18.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.11.2020	56.7	24.2	6.6	25.2	0.62	20.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.11.2020	51.6	20.8	6.4	19.5	0.58	16.9	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.11.2020	53.0	31.6	7.0	26.1	0.45	22.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.11.2020	57.3	26.1	6.7	23.2	0.69	19.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**54.73**	**26.30**	**6.73**	**23.05**	**0.56**	**19.83**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff. 2012**	**IS 5182 : Part 6 :2006 (Reaff. 2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182(Part-11):2006 Reaff,2012**	**IS:5182(Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001260**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near BMH**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
04.11.2020	62.1	30.1	7.5	24.7	0.62	21.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.11.2020	57.1	31.0	7.2	26.1	0.69	20.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.11.2020	60.5	28.1	7.4	20.1	0.55	18.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.11.2020	58.2	29.0	7.5	27.3	0.72	21.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.11.2020	61.2	30.0	6.8	24.6	0.67	22.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.11.2020	59.0	28.6	7.0	22.8	0.58	20.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.11.2020	57.0	30.4	7.3	19.4	0.49	17.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.11.2020	64.2	31.7	7.6	28.5	0.75	24.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**59.91**	**29.86**	**7.28**	**24.18**	**0.63**	**20.80**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001260**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Jetty**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
04.11.2020	81.5	40.0	8.1	23.1	0.71	22.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.11.2020	80.0	38.1	7.5	25.6	0.69	24.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.11.2020	79.0	42.6	7.8	24.5	0.78	22.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.11.2020	84.1	37.0	6.9	27.2	0.66	25.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.11.2020	80.0	39.2	7.8	25.8	0.58	23.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.11.2020	81.9	40.1	7.2	26.1	0.77	21.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.11.2020	79.6	41.4	8.0	23.7	0.54	21.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.11.2020	82.0	42.0	7.8	20.1	0.62	23.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**81.01**	**40.05**	**7.63**	**24.51**	**0.66**	**22.93**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov, 2009 Gatt. Notification

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001260**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Dosinga**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
04.11.2020	44.6	28.0	7.6	26.4	0.64	22.0	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.11.2020	47.0	26.1	6.8	23.1	0.58	20.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.11.2020	45.1	25.4	7.5	27.3	0.67	19.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.11.2020	43.0	27.0	7.0	25.1	0.52	22.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.11.2020	49.2	28.9	6.2	19.2	0.48	17.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.11.2020	44.1	31.0	6.5	20.7	0.56	18.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.11.2020	42.0	28.0	6.9	24.1	0.64	21.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.11.2020	45.0	31.2	6.7	22.7	0.57	19.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**45.00**	**28.20**	**6.90**	**23.57**	**0.58**	**20.15**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By –

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MSK TESTING★INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001260**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near Bhitarkanika**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
04.11.2020	46.0	27.0	6.1	22.0	0.46	16.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.11.2020	48.0	31.0	6.8	21.5	0.49	19.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.11.2020	50.1	32.6	6.3	23.0	0.58	17.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.11.2020	47.0	28.0	7.2	26.1	0.69	24.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.11.2020	44.6	30.0	6.4	22.4	0.52	20.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.11.2020	42.1	28.5	6.2	21.4	0.47	15.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.11.2020	49.4	30.7	6.5	23.4	0.62	21.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.11.2020	47.0	31.0	6.9	24.2	0.71	22.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**46.77**	**29.85**	**6.55**	**23.00**	**0.56**	**19.73**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gazt. Notification

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MSK TESTING★INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/120
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/00197
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 03.11.2020

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.09	7.42
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	92.0	10.8
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	54.0	5.2
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	90.0	20.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	5.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	20.0	4.7
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	27.0	7.4
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2300.0	80.0

S. Kaunge
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For Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/121
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/00199
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 03.11.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.25	7.31
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	32.0	4.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	60.0	7.3
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	86.0	28.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	2.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	19.0	3.1
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	25.0	4.3
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1700.0	80.0

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/122
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/00604
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 18.11.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.1	7.3
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	80.0	8.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	68.0	7.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	108.0	24.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	3.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	15.0	4.1
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	19.0	5.3
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2100.0	85.0

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/123
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/00606
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 18.11.2020

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.1	7.7
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	92.0	11.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	68.0	9.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	98.0	31.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	2.8	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	12.0	2.8
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	21.0	3.7
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2300.0	90.0

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
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DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/124
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/00201
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 03.11.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.62
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1580.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.2
4.	Moisture content	%	Lab Method	34.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1475.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	589.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	10.0
9.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.1
10.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	29.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1391.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	324.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	18.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	30.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	32.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	354.0
17.	Lead (as Pb)	mg/kg	EPA 6010D	10.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	6875.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	28.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/124

Date- 01.12.2020

21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	287.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	208.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	33.0
26.	Silt	%	TPM/MSK/P&E/1/36A	24.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	30.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1397
2.	Total count (Phytobenthos)	50 mg wet sediment	288
3.	No of species (Phytobenthos)	Nos.	2
4.	Diversity index (Phytobenthos)	----	1.84
5.	Major Species (phytobenthos)	----	*Navicula closterium, Biddulphia mobilensis,*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-21,Bivalvia-10
8.	Total no. of species encountered (Fauna)	Nos.	29
9.	Total fauna (Fauna)	per m^3	178

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MSK TESTING ★ INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/125
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/00202
Sample Description : Sea Sediment
Sampling Location : Dredging Source Site
Date of sampling : 03.11.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.88
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1810.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.1
4.	Moisture content	%	Lab Method	36
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1627.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	621.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	12.0
9.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.1
10.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	30.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1358.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	384.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	24.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	31.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	35.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	480.0
17.	Lead (as Pb)	mg/kg	EPA 6010D	13.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	6742.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	52.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/125

Date- 01.12.2020

21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	627.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	532.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	30.0
26.	Silt	%	TPM/MSK/P&E/1/36A	22.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	28.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1600
2.	Total count (Phytobenthos)	50 mg wet sediment	300
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	----	1.65
5.	Major Species (phytobenthos)	----	*Coscinodiscus* sp, *Navicula closterium, Biddulphia mobilensis, Gyrosigma*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-36,Bivalvia-12
8.	Total no. of species encountered (Fauna)	Nos.	25
9.	Total fauna (Fauna)	per m^3	169

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/126
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/00608
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 17.11.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	8.12
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1487.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.89
4.	Moisture content	%	Lab Method	40.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1660.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	654.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	12.0
9.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.2
10.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	31.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1402.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	378.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	22.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	27.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	33.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	466.0
17.	Lead (as Pb)	mg/kg	EPA 6010D	12.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	6870.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	25.0

Ref. No. BBS/126

Date- 01.12.2020

21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	302.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	228.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	35.0
26.	Silt	%	TPM/MSK/P&E/1/36A	23.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	32.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1369
2.	Total count (Phytobenthos)	50 mg wet sediment	259
3.	No of species (Phytobenthos)	Nos.	2
4.	Diversity index (Phytobenthos)	----	1.91
5.	Major Species (phytobenthos)	----	*Biddulphia mobilensis, Nizschia distans, Spirulina aeruginea*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-49,Bivalvia-26
8.	Total no. of species encountered (Fauna)	Nos.	28
9.	Total fauna (Fauna)	per m^2	166

Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/127
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/00609
Sample Description : Sea Sediment
Sampling Location : Dredging Source Site
Date of sampling : 17.11.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.89
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1325.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.6
4.	Moisture content	%	Lab Method	39.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1554.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	664.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	14.0
9.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.5
10.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	36.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1428.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	351.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	20.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	27.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	36.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	448.0
17.	Lead (as Pb)	mg/kg	EPA 6010D	14.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	7548.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	52.0

MSK TESTING • INSPECTION

Ref. No. BBS/127

Date- 01.12.2020

21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	640.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	552.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	37.0
26.	Silt	%	TPM/MSK/P&E/1/36A	25.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	35.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1287
2.	Total count (Phytobenthos)	50 mg wet sediment	320
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	----	1.91
5.	Major Species (phytobenthos)	----	*Coscinodiscus granii, Pleurosigma normani, Biddulphia mobilensis, Nizschia distans,*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-59,Bivalvia-34
8.	Total no. of species encountered (Fauna)	Nos.	34
9.	Total fauna (Fauna)	per m^3	185

S. Kaunge
Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/126
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/01200
Sample Description : VOC Monitoring

ANALYSIS

Sl. No	Date of Monitoring	Sampling Location	Method of Analysis	Parameter	Result
1.	02.11.2020	Jetty	NIOSH-1501	Volatile Organic Compound (VOC in mg/m^3)	<0.008
2.	03.11.2020	Wagon Tippler			<0.008
3.	04.11.2020	Near Silo			<0.008
4.	05.11.2020	Transfer Point			<0.008
5.	07.11.2020	BMH Workshop			<0.008
6.	08.11.2020	Steel Yard			<0.008
7.	09.11.2020	FCC Shed			<0.008
8.	14.11.2020	SS 6 Office			<0.008

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/127
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/01099
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day L Time dB(A)			Night Time L dB(A)		
			MAX	MIN	AVG.	MAX	MIN	AVG.
1.	02.11.2020	Colony	50.9	38.6	45.8	42.0	36.0	38.0
2.	04.11.2020	Kanakprasad	52.0	40.0	45.7	44.0	38.5	40.0
3.	08.11.2020	Near BMH	68.1	56.0	60.0	55.0	45.6	50.0
4.	10.11.2020	Jetty	71.0	61.6	69.2	65.0	53.1	61.4
5.	14.11.2020	Dosinga	51.2	40.9	47.3	42.4	35.3	37.4
6.	16.11.2020	Near Bhitarkanika	46.0	39.7	42.0	39.0	34.2	36.6

Noise Limit as per CPCB

Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time	NOTE :
Industrial Area	75	70	Day Time : 06.00 Hr.-22.00 Hr.
Commercial Area	65	55	Night Time:22.00 Hr.-06.00 Hr.
Residential Area	55	45	
Silence Zone	50	40	

S. Kaunge
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MSK TESTING & INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/128
Date : 01.12.2020
Sample No. : MSKGL/ED/2020-21/11/01120
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg Leq dB(A)
1.	04.11.2020	Stack Yard	88.0	53.1	66.8
2.	05.11.2020	Wagon Tippler	88.4	57.8	65.5
3.	08.11.2020	Near Silo	87.0	67.4	78.4
4.	10.11.2020	Near Stacker & Reclaimer	87.9	62.0	68.5
5.	11.11.2020	Project Area	86.9	41.8	62.2
6.	12.11.2020	Transfer Point	89.1	56.5	72.8
7.	14.11.2020	Workshop	74.4	35.1	43.0
8.	17.11.2020	Steel Yard	89.6	32.5	60.4
9.	19.11.2020	FCC Shed	82.0	56.1	72.3
10.	21.11.2020	Near Port Canteen	86.0	58.0	72.8

OSHA'S Permissible Noise Exposure Limits	
Noise Level	**Exposure Limit**
90 dBA	**8.0 hours**

Report Prepared by

MITRA S.K. PRIVATE LIMITED

For Mitra S. K. Private Limited
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MSK TESTING • INSPECTION

Ref : **MSKGL/FD/2020-21/000903** Date : **01.12.2020**

GROUND WATER LEVEL MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/FD/2020-21/000903**
Type of Sample	**Piezometric Well**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	18.11.2020	11.81
2	Near WTP	18.11.2020	10.43

Report Prepared by:

For Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, 756171 ODISHA

Report No. : BBS/129
Date : 01.12.2020
Sample No. : MSKGL/FD/2020-21/11/00158
Date of sampling : 18.11.2020
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.31
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	4.64
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	47.52
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	82.37
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	320.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	121.2
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	14.26
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	178.20
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	214.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/129

Date- 01.12.2020

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Raungo
Report Prepared By:

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For Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/130
Date : 01.12.2020
Sample No. : MSKGL/FD/2020-21/11/00159
Date of sampling : 18.11.2020
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.37
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	5.26
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	47.52
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	92.67
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	360.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	161.6
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.01
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	198.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	210.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/130

Date- 01.12.2020

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

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For Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/131
Date : 01.12.2020
Sample No. : MSKGL/FD/2020-21/11/00160
Date of sampling : 18.11.2020
Sampling Description : Ground Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.69
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	6.68
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	63.36
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	113.26
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	420.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	181.8
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.01
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	180.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	218.0

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Ref. No. BBS/131 **Date- 01.12.2020**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kamuge
Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S. K. Private Limited

Authorized Signatory

MONTHLY ENVIRONMENT MONITORING REPORT

DECEMBER- 2020

Directed by

THE DHAMRA PORT COMPANY LIMITED

adani

Ports and Logistics

AT : DOSINGA, PO : DHAMRA
DIST- BHADRAK, PIN : 756171 ODISHA

Conducted by

M/s. Mitra S. K. Private Limited

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MSK TESTING - INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001609
Type of Sample	Ambient Air Sample
Sampling Location	Colony
Sampling Done by	Mr. Kunja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
02.12.2020	56.0	31.0	6.1	19.6	0.41	15.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.12.2020	54.0	29.4	7.5	27.1	0.69	22.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
09.12.2020	51.0	33.1	6.6	23.7	0.58	19.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.12.2020	57.0	28.2	7.0	24.2	0.64	20.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
16.12.2020	50.0	30.2	6.8	22.5	0.55	18.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.12.2020	52.0	28.0	6.5	20.4	0.47	16.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
23.12.2020	51.0	30.0	6.9	25.1	0.74	22.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.12.2020	53.0	32.1	6.6	21.8	0.61	17.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**53.00**	**30.25**	**6.75**	**23.05**	**0.59**	**19.08**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	100	60	80	80	4	400	180	1	20	6	5	1
Time Weighted Average (hrs.)	24	24	24	24	1	24	1	24	Annual	Annual	Annual	Annual
TEST METHOD	IS 5182: Part 23:2006 (Reaff. 2012	IS 5182: Part 24:2019	IS 5182 : Part 2 :2001 (Reaff. 2012	IS 5182 : Part 6 :2006 (Reaff. 2012)	IS 5182 : Part 10 :1999 (Reaff.2014)	IS 5182: Part 25:2018	IS 5182: Part 09:1974	EPA - IO3.4June,1999	EPA - IO3.4June,1999	EPA - IO3.4June,1999	IS:5182(Part-11):2006 Reaff.2012	IS:5182(Part-12):2004 Reaff.: 2014

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gazt. Notification

S. Kanungo
Prepared By

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Checked By- P Pradhan

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AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001609**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Kanakprasad**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
02.12.2020	55.0	26.7	6.1	19.7	0.41	16.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.12.2020	53.0	28.4	7.0	20.6	0.52	18.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
09.12.2020	57.1	29.0	7.2	26.8	0.67	22.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.12.2020	58.4	30.5	6.7	24.6	0.55	20.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
16.12.2020	54.0	27.6	6.5	25.1	0.62	21.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.12.2020	56.2	31.0	7.6	27.4	0.76	25.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
23.12.2020	55.0	31.7	6.6	23.5	0.60	19.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.12.2020	59.3	34.6	6.9	28.6	0.81	26.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**56.00**	**29.91**	**6.83**	**24.54**	**0.62**	**21.29**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	IS 5182: Part 23:2006 (Reaff. 2012	IS 5182: Part 24:2019	IS 5182 : Part 2 :2001 (Reaff. 2012	IS 5182 : Part 6 :2006 (Reaff. 2012)	IS 5182 : Part 10 :1999 (Reaff.2014)	IS 5182: Part 25:2018	IS 5182: Part 09:1974	EPA - IO3.4June.1999	EPA - IO3.4June.1999	EPA - IO3.4June.1999	IS:5182(Part-11):2006 Reaff.2012	IS:5182(Part-12):2004 Reaff.: 2014

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AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001609
Type of Sample	Ambient Air Sample
Sampling Location	Near BMH
Sampling Done by	Mr. Kunja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
02.12.2020	64.0	31.2	7.6	28.4	0.79	25.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.12.2020	58.6	30.0	7.1	26.5	0.68	22.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
09.12.2020	63.0	39.5	6.3	21.8	0.47	18.9	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.12.2020	60.0	30.1	6.6	23.1	0.59	19.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
16.12.2020	60.6	30.2	6.9	25.3	0.66	21.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.12.2020	63.2	29.7	6.5	23.7	0.55	20.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
23.12.2020	61.0	34.1	6.1	20.4	0.40	17.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.12.2020	66.0	33.0	7.0	27.5	0.79	24.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**62.05**	**32.23**	**6.8**	**24.59**	**0.62**	**21.24**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff, 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff ,2012**	**IS 5182 : Part 6 :2006 (Reaff ,2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff.2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

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Prepared By – S. Kanunga

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Checked By- [illegible]

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AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001609
Type of Sample	Ambient Air Sample
Sampling Location	Jetty
Sampling Done by	Mr. Kunja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
02.12.2020	80.7	41.2	7.9	24.9	0.67	21.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.12.2020	84.2	39.0	7.5	28.6	0.79	26.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
09.12.2020	82.8	41.5	7.6	26.4	0.74	22.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.12.2020	83.2	40.0	8.2	25.5	0.68	23.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
16.12.2020	80.0	41.6	7.1	27.3	0.71	25.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.12.2020	85.1	42.0	7.8	23.4	0.57	20.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
23.12.2020	82.3	39.8	7.3	22.5	0.48	19.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.12.2020	87.2	43.2	8.5	20.8	0.42	17.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	83.19	41.04	7.74	24.93	0.63	22.19	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi AAQ Standard	100	60	80	80	4	400	180	1	20	6	5	1
Time Weighted Average (hrs.)	24	24	24	24	1	24	1	24	Annual	Annual	Annual	Annual
TEST METHOD	IS 5182: Part 23:2006 (Reaff. 2012	IS 5182: Part 24:2019	IS 5182 : Part 2 :2001 (Reaff .2012	IS 5182 : Part 6 :2006 (Reaff .2012)	IS 5182 : Part 10 :1999 (Reaff.2014)	IS 5182: Part 25:2018	IS 5182: Part 09:1974	EPA - IO3.4 June, 1999	EPA - IO3.4June,1999	EPA - IO3.4June,1999	IS:5182 (Part-11):2006 Reaff,2012	IS:5182 (Part-12):2004 Reaff.:2014

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AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001609
Type of Sample	Ambient Air Sample
Sampling Location	Dosinga
Sampling Done by	Mr. Kunja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
02.12.2020	51.0	30.0	6.4	22.8	0.57	19.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.12.2020	48.6	28.6	7.1	27.6	0.69	25.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
09.12.2020	47.6	27.4	6.8	26.1	0.75	23.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.12.2020	52.3	28.2	6.2	20.6	0.48	18.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
16.12.2020	48.1	30.0	6.9	25.1	0.64	21.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.12.2020	49.6	33.0	6.1	19.4	0.41	16.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
23.12.2020	50.3	31.0	6.7	23.5	0.65	20.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.12.2020	53.0	32.0	7.5	28.6	0.81	26.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	50.03	30.03	6.71	24.21	0.63	21.41	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi AAQ Standard	100	60	80	80	4	400	180	1	20	6	5	1
Time Weighted Average (hrs.)	24	24	24	24	1	24	1	24	Annual	Annual	Annual	Annual
TEST METHOD	IS 5182: Part 23:2006 (Reaff. 2012	IS 5182: Part 24:2019	IS 5182 : Part 2 :2001 (Reaff .2012	IS 5182 : Part 6 :2006 (Reaff .2012)	IS 5182 : Part 10 :1999 (Reaff.2014)	IS 5182: Part 25:2018	IS 5182: Part 09:1974	EPA - IO3.4 June,1999	EPA - IO3.4June,1999	EPA - IO3.4June,1999	IS:5182 (Part-11):2006 Reaff.2012	IS:5182 (Part-12):2004 Reaff.: 2014

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gntl. Notification

Prepared By

MITRA S.K. PRIVATE LIMITED BBSR

Checked By-

Mitra S. K. Private Limited

Plot No. 178, Sec-A, Zone-B
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Odisha
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MSK
TESTING - INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001609
Type of Sample	Ambient Air Sample
Sampling Location	Near Bhitarkanika
Sampling Done by	Mr. Kunja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
02.12.2020	50.0	28.4	6.2	19.8	0.42	16.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.12.2020	51.1	29.1	6.6	23.1	0.54	19.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
09.12.2020	48.6	31.5	7.0	27.3	0.69	25.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.12.2020	49.3	32.0	6.4	24.5	0.57	21.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
16.12.2020	47.6	30.8	6.9	26.7	0.64	24.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.12.2020	53.2	33.0	6.3	22.1	0.49	20.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
23.12.2020	51.4	32.1	6.5	20.8	0.51	17.9	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.12.2020	50.9	31.6	7.2	28.6	0.78	26.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**50.26**	**31.06**	**6.6**	**24.11**	**0.58**	**21.46**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff.2012**	**IS:5182 (Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gazt. Notification

Prepared By – S. Kanungo

MITRA S.K. PRIVATE LIMITED BBSR

Checked By- P. Pradhan

Mitra S. K. Private Limited

Plot No. 178, Sec-A, Zone-B
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MSK TESTING - INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/406
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/11/01350
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day L Time dB(A)			Night Time L dB(A)		
			MAX	MIN	AVG.	MAX	MIN	AVG.
1.	02.12.2020	Colony	52.1	40.0	45.0	41.2	37.0	38.4
2.	04.12.2020	Kanakprasad	51.2	38.6	44.3	43.4	37.2	39.3
3.	06.12.2020	Near BMH	69.0	58.1	60.9	58.6	44.0	53.1
4.	27.12.2020	Jetty	70.0	60.4	67.5	64.2	55.0	62.0
5.	19.12.2020	Dosinga	52.0	42.1	47.0	41.3	35.0	36.1
6.	11.12.2020	Near Bhitarkanika	47.7	40.0	42.6	38.2	35.4	36.1

Noise Limit as per CPCB

Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time	NOTE :
Industrial Area	75	70	Day Time : 06.00 Hr.-22.00 Hr.
Commercial Area	65	55	Night Time:22.00 Hr.-06.00 Hr.
Residential Area	55	45	
Silence Zone	50	40	

S. Kanungo
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited
P. Prasad
Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING + INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/407
Date : 01.01.2020
Sample No. : MSKGL/ED/2020-21/12/01410
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg Leq dB(A)
1.	12.12.2020	Stack Yard	86.0	35.7	64.6
2.	13.12.2020	Wagon Tippler	84.0	49.4	60.6
3.	23.12.2020	Near Silo	85.4	61.2	78.4
4.	15.12.2020	Near Stacker & Reclaimer	76.8	57.0	66.4
5.	16.12.2020	Project Area	84.0	49.4	60.7
6.	17.12.2020	Transfer Point	86.4	37.7	63.6
7.	19.12.2020	Workshop	87.2	59.4	72.5
8.	20.12.2020	Steel Yard	74.2	56.9	62.6
9.	21.12.2020	FCC Shed	88.0	30.9	70.3
10.	22.12.2020	Near Port Canteen	85.0	49.8	69.0

OSHA'S Permissible Noise Exposure Limits	
Noise Level	**Exposure Limit**
90 dBA	**8.0 hours**

Report Prepared by:

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For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

Ref : **MSKGL/FD/2020-21/001076**

Date : **01.01.2021**

GROUND WATER LEVEL MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/FD/2020-21/001076**
Type of Sample	**Piezometric Well**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	15.12.2020	11.45
2	Near WTP	15.12.2020	9.54

Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, 756171 ODISHA

Report No. : BBS/408
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00341
Date of sampling : 15.12.2020
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	---	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.16
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	3.26
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	48.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	78.38
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	340.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	163.2
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.20
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	200.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Par. 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	---	---	IS 3025 (Part 14)- 2013	180.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/408

Date- 01.01.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Karunya
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

P Pradhan

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/409
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/11/00342
Date of sampling : 15.12.2020
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.18
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	3.58
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	38.79
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	88.54
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	298.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	159.5
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	17.64
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	190.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	194.0

Ref. No. BBS/409

Date- 01.01.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kanungo
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

P Pradhan

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/410
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00343
Date of sampling : 15.12.2020
Sampling Description : Ground Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.34
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	2.90
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	48.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	58.78
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	290.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	142.8
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	14.40
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	180.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	—	—	IS 3025 (Part 14)- 2013	235.0

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Ref. No. BBS/410 **Date- 01.01.2021**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxatim	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxatim	US EPA 8082	BDL(DL:0.0005)

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/411
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/00901
Sample Description : VOC Monitoring

ANALYSIS

Sl. No	Date of Monitoring	Sampling Location	Method of Analysis	Parameter	Result
1.	01.12.2020	Jetty	NIOSH-1501	Volatile Organic Compound (VOC in mg/m^3)	<0.008
2.	02.12.2020	Wagon Tippler			<0.008
3.	03.12.2020	Near Silo			<0.008
4.	05.12.2020	Transfer Point			<0.008
5.	06.12.2020	BMH Workshop			<0.008
6.	07.12.2020	Steel Yard			<0.008
7.	08.12.2020	FCC Shed			<0.008
8.	09.12.2020	SS 6 Office			<0.008

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/391
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01089
Sample Description : Flue Gas Monitoring
Date of Sampling : 14.12.2020
Time of Sampling : 12:20 PM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: Intake Pump House DG-1		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 160 KvA (0.5 HP Load)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 3.31 m		
2.	Diameter of the stack at sampling point	: 0.0652 m		
3.	Height of the sampling point from GL	: 3.31 m		
4.	Area of Stack	: 0.00334 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 125	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 8.46	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 74.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.030	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 9.0	----	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.043	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.009	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.025	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.068	≤ 4.0 (g/Kw/hr)	USEPA Part 18

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/392
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01090
Sample Description : Flue Gas Monitoring
Date of Sampling : 16.12.2020
Time of Sampling : 11:05 AM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: PSS DG		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 160 KvA (No Load)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 3.33 m		
2.	Diameter of the stack at sampling point	: 0.09 m		
3.	Height of the sampling point from GL	: 3.3 m		
4.	Area of Stack	: 0.00636 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	2. Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 96	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 762	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 15.8	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 280.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.047	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 11.0	—	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.181	—	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.047	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.020	—	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.201	≤ 4.0 (g/Kw/hr)	USEPA Part 18

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MSK TESTING - INSPECTION

TEST REPORT

Name & Address of the Customer :
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DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/393
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01091
Sample Description : Flue Gas Monitoring
Date of Sampling : 16.12.2020
Time of Sampling : 11:50 AM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: SS-9 DG		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 50 KvA (0.5 HP Load)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 2.04 m		
2.	Diameter of the stack at sampling point	: 0.07 m		
3.	Height of the sampling point from GL	: 2.04 m		
4.	Area of Stack	: 0.00385 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 107	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 762	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 20.15	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 209.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.136	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 7.9	----	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.294	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.059	≤ 0.3 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.037	---	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.331	≤ 4.7 (g/Kw/hr)	USEPA Part 18

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/394
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01092
Sample Description : Flue Gas Monitoring
Date of Sampling : 16.12.2020
Time of Sampling : 02:50 PM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: SS-7 DG		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 125 KvA (On Load 0.5 HP)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 2.41 m		
2.	Diameter of the stack at sampling point	: 0.11 m		
3.	Height of the sampling point from GL	: 2.41 m		
4.	Area of Stack	: 0.0095 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 132	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 762	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 13.68	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 332.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.109	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 8.3	----	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.228	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.048	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.028	—	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.256	≤ 4.0 (g/Kw/hr)	USEPA Part 18

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MSK TESTING & INSPECTION

TEST REPORT

Name & Address of the Customer :
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DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/395
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01093
Sample Description : Flue Gas Monitoring
Date of Sampling : 16.12.2020
Time of Sampling : 01:07 PM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: SS-8 DG		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 50 KvA (0.5 HP Load)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 2.36 m		
2.	Diameter of the stack at sampling point	: 0.07 m		
3.	Height of the sampling point from GL	: 2.36 m		
4.	Area of Stack	: 0.00385 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 97	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 762	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 17.31	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 184.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.136	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 7.4	—	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.298	—	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.054	≤ 0.3 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.037	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.335	≤ 4.7 (g/Kw/hr)	USEPA Part 18

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/396
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01094
Sample Description : Flue Gas Monitoring
Date of Sampling : 16.12.2020
Time of Sampling : 03:45 PM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: MCC-4 DG		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 160 KvA (No Load)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 3.54 m		
2.	Diameter of the stack at sampling point	: 0.125 m		
3.	Height of the sampling point from GL	: 3.54 m		
4.	Area of Stack	: 0.0122 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 131	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 762	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 14.45	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 449.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.135	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 8.3	----	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.277	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.069	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.027	—	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.304	≤ 4.0 (g/Kw/hr)	USEPA Part 18

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/397
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01095
Sample Description : Flue Gas Monitoring
Date of Sampling : 15.12.2020
Time of Sampling : 04:10 PM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: SS-6 DG		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 125 KvA (0.5 HP Load)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 2.30 m		
2.	Diameter of the stack at sampling point	: 0.109 m		
3.	Height of the sampling point from GL	: 2.30 m		
4.	Area of Stack	: 0.00933 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 141	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 762	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 13.66	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 445.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.163	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 10.6	—	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.371	—	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.079	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.040	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.411	≤ 4.0 (g/Kw/hr)	USEPA Part 18

S. Kaunge
Report Prepared By:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

Plot No. 178, Sec-A, Zone-B
Mancheswar Industrial Estate
Bhubaneswar-751 010
Odisha
CIN : U51909WB1956PTC023037

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/398
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01096
Sample Description : Flue Gas Monitoring
Date of Sampling : 14.12.2020
Time of Sampling : 05:25 PM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: Kalibhanja Guest House DG (Small)		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 62.5 KvA (Full Load)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 2.39 m		
2.	Diameter of the stack at sampling point	: 0.08 m		
3.	Height of the sampling point from GL	: 2.39 m		
4.	Area of Stack	: 0.00503 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 99	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 14.94	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 206.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.130	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 7.2	----	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.269	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.064	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.038	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.307	≤ 4.0 (g/Kw/hr)	USEPA Part 18

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/399
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01097
Sample Description : Flue Gas Monitoring
Date of Sampling : 15.12.2020
Time of Sampling : 12:05 PM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: Township DG-5		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 180 KvA (No Load)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 3.52 m		
2.	Diameter of the stack at sampling point	: 0.125 m		
3.	Height of the sampling point from GL	: 3.52 m		
4.	Area of Stack	: 0.01227 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 115	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 13.04	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 421.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.164	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 14.9	----	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.273	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.069	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.026	—	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.299	≤ 4.0 (g/Kw/hr)	USEPA Part 18

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For Mitra S.K. Private Limited

P. Pradhan

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Mitra S. K. Private Limited

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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/400
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01098
Sample Description : Flue Gas Monitoring
Date of Sampling : 15.12.2020
Time of Sampling : 01:25 PM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: MCC-1 DG		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 160 KvA (No Load)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 3.21 m		
2.	Diameter of the stack at sampling point	: 0.08 m		
3.	Height of the sampling point from GL	: 3.21 m		
4.	Area of Stack	: 0.00503 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 115	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 10.73	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 142.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.044	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 12.1	—	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.086	—	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.024	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.008	—	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.094	≤ 4.0 (g/Kw/hr)	USEPA Part 18

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/401
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01099
Sample Description : Flue Gas Monitoring
Date of Sampling : 15.12.2020
Time of Sampling : 10:45 AM

ANALYSIS RESULT

A.	**General information about stack :**			
1.	Stack connected to	: General Substation (DG-6 GSS)		
2.	Emission due to	: High Speed Diesel (HSD)		
3.	Material of construction of stack	: M.S		
4.	Shape of stack	: Circular		
5.	Generation Capacity	: 200 KvA (No Load)		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 2.3 m		
2.	Diameter of the stack at sampling point	: 0.0652 m		
3.	Height of the sampling point from GL	: 2.3 m		
4.	Area of Stack	: 0.00334 m^2		
C.	**Analysis/Characteristic of stack:**			
1.	Fuel used : HSD			
2.	Fuel Consumption : NA			
D.	**Results of sampling & analysis of gaseous emission**	**Result**	**Standard as per Moef & CC**	**METHOD**
1.	Temperature of emission (°C)	: 116	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	: 760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	: 9.0	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	: 80.0	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	: 0.031	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	: 15.4	----	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	: 0.047	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	: 0.012	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	: 0.004	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	: 0.051	≤ 4.0 (g/Kw/hr)	USEPA Part 18

S. Karunga
Report Prepared by:

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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/390
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01100
Sample Description : DG Noise

DG Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg Leq dB(A)
1.	14.12.2020	General Substation DG 200 KvA	74.2	72.5	73.3
2.	14.12.2020	DPCL Intake Pump House DG 160 KvA	73.6	71.2	72.5
3.	14.12.2020	Kalibhanja Guest House DG 62.5 KvA	72.8	70.1	71.4
4.	15.12.2020	SS-6 DG 125 KvA	74.1	72.3	73.1
5.	16.12.2020	MCC-4 DG 160 KvA	74.8	71.2	73.0
6.	16.12.2020	SS-8 DG 50 KvA	73.5	69.8	71.6
7.	16.12.2020	SS-7 DG 125 KvA	74.0	70.4	72.2
8.	16.12.2020	SS-9 DG 50 KvA	73.8	68.4	71.1
9.	16.12.2020	PSS DG 160 KvA	74.2	69.5	71.8
10.	15.12.2020	Township DG 180 KvA	73.9	71.4	72.6
11.	15.12.2020	MCC-1 DG 160 KvA	72.8	68.6	70.7

Noise Limit	
At 1meter from the Enclosure Surface	
DG Limit	75 dB

Report Prepared by: S. Kaungo

MITRA S.K. PRIVATE LIMITED BBSR

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Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/412
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00198
Date of sampling : 06.12.2020
Sampling Description : Drinking Water
Sampling Location : Township E Block Area
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.97
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	7.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	35.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	72.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	442.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	180.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	27.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	188.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	0.78
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	42.0

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Ref. No. BBS/412 **Date- 01.01.2021**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kanuga
Report Prepared by:

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For Mitra S. K. Private Limited.

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MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/413
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00199
Date of sampling : 06.12.2020
Sampling Description : Drinking Water
Sampling Location : Prefab Area
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.93
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	6.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	39.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	70.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	447.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	176.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	26.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	190.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	0.82
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	36.0

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Ref. No. BBS/413 **Date- 01.01.2021**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/414
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00200
Date of sampling : 05.12.2020
Sampling Description : Drinking Water
Sampling Location : Jetty Area
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

SL No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.52
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	9.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	48.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	76.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	477.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	190.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	28.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	184.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	40.0

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Ref. No. BBS/414 **Date- 01.01.2021**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kanungo
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

P Pradhan

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Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSHINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/415
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00201
Date of sampling : 05.12.2020
Sampling Description : Drinking Water
Sampling Location : Port Canteen
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.5
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	8.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	46.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	72.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	469.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	165.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	28.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	186.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	38.0

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Ref. No. BBS/415 **Date- 01.01.2021**

32	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kumar
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

P Pradhan

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/416
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00202
Date of sampling : 06.12.2020
Sampling Description : Drinking Water
Sampling Location : DAV Public School (Kuamara)
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.3
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	7.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	16.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	94.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	365.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	192.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	3.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	53.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	34.0

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Ref. No. BBS/416 **Date- 01.01.2021**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kounge
Report Prepared by:

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For Mitra S. K. Private Limited.

P Pradhan

Authorized Signatory

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MSK TESTING + INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/417
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00203
Date of sampling : 05.12.2020
Sampling Description : Drinking Water
Sampling Location : Birupa Colony
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.71
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	11.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	37.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	65.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	445.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	168.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	22.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	180.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	—	IS 3025 (Part 14)- 2013	34.0

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32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/418
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00204
Date of sampling : 06.12.2020
Sampling Description : Drinking Water
Sampling Location : Health Centre
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.79
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	54.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	36.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	72.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	452.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	170.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	20.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	145.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	42.0

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Date- 01.01.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING & INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/419
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00205
Date of sampling : 05.12.2020
Sampling Description : Drinking Water
Sampling Location : Security Barrack (North Gate)
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.88
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	53.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	40.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	70.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	377.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	185.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	28.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	176.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	36.0

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32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kanungo
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

P Prad Lei

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/420
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00206
Date of sampling : 05.12.2020
Sampling Description : Drinking Water
Sampling Location : SS-6 Office
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organisan	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.7
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	8.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	39.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	74.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	425.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	186.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	26.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	170.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	39.0

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32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

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For Mitra S. K. Private Limited.

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CIN : U51909WB1956PTC023037

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MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/421
Date : 01.01.2020
Sample No. : MSKGL/FD/2020-21/12/00209
Date of sampling : 05.12.2020
Sampling Description : Ground Water
Sampling Location : Kanak Prasad
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.51
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	51.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	30.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	74.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	454.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	182.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	24.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	176.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	52.0

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32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kaunga
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

P. Pradhan

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/422
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00208
Date of sampling : 05.12.2020
Sampling Description : Ground Water
Sampling Location : Balisahi
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.78
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	55.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	45.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	67.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	489.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	185.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	25.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	180.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	58.0

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Ref. No. BBS/422 **Date- 01.01.2021**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kanungo
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

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Authorized Signatory

Mitra S. K. Private Limited

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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/423
Date : 01.01.2021
Sample No. : MSKGL/FD/2020-21/12/00207
Date of sampling : 05.12.2020
Sampling Description : Ground Water
Sampling Location : Dosinga
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.75
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	38.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	38.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	63.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	431.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	170.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	24.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	196.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	64.0

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Ref. No. BBS/423 **Date- 01.01.2021**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kaunga
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited.

Authorized Signatory

Mitra S. K. Private Limited

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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/402
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/00605
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 05.12.2020

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.14	7.3
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	116.0	9.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	29.0	3.3
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	106.0	12.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	8.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	36.0	2.2
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	47.0	6.0
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2200.0	43.0

Report Prepared by:

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For Mitra S. K. Private Limited

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MSK
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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/403
Date : 01.01.2020
Sample No. : MSKGL/ED/2020-21/12/00604
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 05.12.2020

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.10	7.04
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	84.0	7.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	37.0	<2.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	141.0	<4.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	2.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	27.0	2.5
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	50.0	7.0
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	700.0	90.0

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MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/404
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01116
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 17.12.2020

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.28	7.35
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	86.0	<2.5
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	84.0	6.2
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	180.0	21.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	6.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	18.0	3.4
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	25.0	4.8
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	700.0	70.0

S. Kanunga
Report Prepared by

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited
P Prabhakar
Authorized Signatory

Mitra S. K. Private Limited

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CIN : U51909WB1956PTC023037

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/405
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01118
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 17.12.2020

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.05	7.36
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	58.0	<2.5
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	77.0	4.3
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	300.0	16.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	4.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	13.8	1.8
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	22.4	2.6
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2200.0	81.0

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/424
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/00652
Sample Description : Surface Water
Sampling Location : Matai River Near DPCL Intake Point
Date of Sampling : 06.12.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standards as per IS 2296	Test Method / Specification	Result
1.	Colour	Hazen	300	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	6.5 - 8.5	APHA 23rd Edition, 4500-H-B	7.49
4.	Copper as Cu	mg/l	1.5	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	1.5	APHA (23rd Edition)4500 - F C/D, 2017	0.25
6.	Iron as Fe	mg/l	50.0	APHA 23rd Edition.3500 Fe B 2017	2.5
7.	Manganese as Mn	mg/l	----	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound as C_6H_5OH	mg/l	0.005	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	0.05	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	0.01	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.05	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	----	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	----	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	----	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	15.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.05	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	----	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	----	APHA 23rd Edition, 2540D	70.0
21.	Temperature	Deg C	----	APHA 23rd Edtn,2550 B	25.0
22.	BOD (3days at 25°C)	mg/l	3.0	APHA (23rd Edition)5210B 2017	2.0
23.	COD	mg/l	----	APHA 23rd Edition, 5220B 2017	16.0
24.	Oil & Grease	mg/l	0.1	APHA 23rd Edition, 5520B 2017	4.0
25.	Ammonical. Nitrogen as N	mg/l	----	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	----	APHA (23rd Edition) 4500- Norg-B,2017	BDL(DL:0.3)
27.	Sulphide as S	mg/l	----	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.01)
28.	Total Residual Chlorine	mg/l	----	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	----	APHA 23rd Edition.4500P, B –D 2017	0.1
30.	Ammonia as NH_3	mg/l	----	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	----	APHA (23rd Edition) 4500- NO3-E, 2017	0.75
32.	Bio-assay Test	—	90% survival of fish after 96 hours in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	—	850 µ IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve
34.	Dissolved Oxygen	mg/l	—	APHA 23rd-2012,4500-O-C	6.2

Report Prepared by: S. Kaungo

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MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/425
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/00653
Sample Description : Surface Water
Sampling Location : Raw Water Reservoir
Date of Sampling : 05.12.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standards as per IS 2296	Test Method / Specification	Result
1.	Colour	Hazen	300	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	6.5 - 8.5	APHA 23rd Edition, 4500-H-B	6.88
4.	Copper as Cu	mg/l	1.5	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	1.5	APHA (23rd Edition)4500 - F C/D, 2017	0.28
6.	Iron as Fe	mg/l	50.0	APHA 23rd Edition,3500 Fe B 2017	0.21
7.	Manganese as Mn	mg/l	----	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound as C_6H_5OH	mg/l	0.005	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	0.05	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	0.01	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.05	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	----	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	----	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	----	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	15.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.05	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	----	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	----	APHA 23rd Edition, 2540D	BDL(DL:2.5)
21.	Temperature	Deg C	----	APHA 23rd Edtn,2550 B	25.0
22.	BOD (3days at 25°C)	mg/l	3.0	APHA (23rd Edition)5210B 2017	2.4
23.	COD	mg/l	----	APHA 23rd Edition, 5220B 2017	20.0
24.	Oil & Grease	mg/l	0.1	APHA 23rd Edition, 5520B 2017	BDL(DL:1.4)
25.	Ammonical. Nitrogen as N	mg/l	----	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	----	APHA (23rd Edition) 4500- Norg-B,2017	BDL(DL:0.3)
27.	Sulphide as S	mg/l	----	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.01)
28.	Total Residual Chlorine	mg/l	—	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	—	APHA 23rd Edition 4500P, B –D 2017	BDL(DL:0.05)
30.	Ammonia as NH_3	mg/l	—	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	—	APHA (23rd Edition) 4500- NO3-E, 2017	0.95
32.	Bio-assay Test	—	90% survival of fish after 96 hours in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	—	850 µ IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve
34.	Dissolved Oxygen	mg/l	—	APHA 23rd-2012,4500-O-C	6.0

Report Prepared by: S. Kaunge

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/426
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01120
Sample Description : Waste Water
Sampling Location : Near SS -6
Date of Sampling : 05.12.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standard as per Sch.VI of EP Rules, 1986	Test Method / Specification	Result
1.	Colour	Hazen	-------	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	5.5 – 9.0	APHA 23rd Edition, 4500-H-B	8.16
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition)4500 - F C/D, 2017	0.54
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition,3500 Fe B 2017	0.82
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	PhenolicCompoun as C_6H_5OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	45.0
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edtn,2550 B	25.0
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	26.0
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	100.0
24.	Oil & Grease	mg/l	10.0	APHA 23rd Edition, 5520B 2017	3.0
25.	Ammonical, Nitrogen as N	mg/l	50.0	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	100.0	APHA (23rd Edition) 4500- Norg-B,2017	3.1
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.1)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition,4500P, B –D 2017	0.32
30.	Ammonia as NH_3	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	2.2
32.	Bioassay Test	—	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	—	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve

Report Prepared by: S. Karunga

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MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK DHAMRA 756171 ODISHA

Report No. : BBS/427
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/00608
Sample Description : Waste Water
Sampling Location : Settling Pond
Date of Sampling : 05.12.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standard as per Sch.VI of EP Rules, 1986	Test Method / Specification	Result
1.	Colour	Hazen	--------	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	5.5 – 9.0	APHA 23rd Edition, 4500-H-B	7.02
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition)4500 - F C/D, 2017	0.47
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition.3500 Fe B 2017	0.24
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	PhenolicCompound as C_6H_5OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	4.0
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edtn,2550 B	25.0
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	16.0
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	59.0
24.	Oil & Grease	mg/l	10.0	APHA 23rd Edition, 5520B 2017	5.0
25.	Ammonical Nitrogen as N	mg/l	50.0	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	100.0	APHA (23rd Edition) 4500- Norg-B,2017	3.6
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.1)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition.4500P, B –D 2017	1.6
30.	Ammonia as NH_3	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	1.2
32.	Bio-assay Test	—	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survival in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	—	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve

Report Prepared by: S. Kanungo

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/428
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01121
Sample Description : Waste Water
Sampling Location :DRDO South Gate
Date of Sampling : 05.12.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standard as per Sch.VI of EP Rules, 1986	Test Method / Specification	Result
1.	Colour	Hazen	------	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	5.5 – 9.0	APHA 23rd Edition, 4500-H-B	7.14
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition)4500 - F C/D, 2017	0.39
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition.3500 Fe B 2017	1.2
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	PhenolicCompoun as C_6H_5OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	38.0
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edtn,2550 B	25.0
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	9.6
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	36.0
24.	Oil & Grease	mg/l	10.0	APHA 23rd Edition, 5520B 2017	BDL(DL:1.4)
25.	Ammonical. Nitrogen as N	mg/l	50.0	APHA (23rd Edition) 4500-NH3-F 2017	2.8
26.	Total Kjeldal Nitrogen as N	mg/l	100.0	APHA (23rd Edition) 4500- Norg-B,2017	BDL(DL:0.3)
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.1)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition,4500P, B –D 2017	1.1
30.	Ammonia as NH_3	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	2.6
32.	Bio-assay Test	—	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	—	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve

Report Prepared by: S. Kaunga

Mitra S. K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/429
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/00605
Sample Description : Waste Water
Sampling Location : DRDO North Gate
Date of Sampling : 05.12.2020

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standard as per Sch.VI of EP Rules, 1986	Test Method / Specification	Result
1.	Colour	Hazen	-------	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	5.5 – 9.0	APHA 23rd Edition, 4500-H-B	7.23
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition)4500 - F C/D, 2017	0.29
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition.3500 Fe B 2017	0.57
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	PhenolicCompoun as C_6H_5OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	38.0
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edtn,2550 B	25.0
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	20.0
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	74.0
24.	Oil & Grease	mg/l	10.0	APHA 23rd Edition, 5520B 2017	BDL(DL:1.4)
25.	Ammonical Nitrogen as N	mg/l	50.0	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	100.0	APHA (23rd Edition) 4500- Norg-B,2017	3.8
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.1)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition.4500P, B -D 2017	0.19
30.	Ammonia as NH_3	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	1.8
32.	Bio-assay Test	—	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	—	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve

Report Prepared by: S. Kanungo

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MSK TESTING - INSPECTION

Date: 01.01.2021

SOIL ANALYSIS REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001546**
Type of Sample	**Soil**
Sampling Location	**S1 : Port Site** **S3 : Dosinga** **S2 : Kanakprasad**
Date of Sampling	**06.12.2020**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Sl. No.	Name of the Parameters		Unit	Test Method	Analysis Result		
					S1	S2	S3
1.	pH Value		----	IS 2720 (Part-26)-1987	8.02	7.58	7.87
2.	Colour		----	TPM/MSK/P&E/1/45	10 YR 5/4 Yellowish Brown	10 YR 5/3 Brown	10 YR 4/3 Brown
3.	Copper (as Cu)		mg/kg	EPA 610D	5.0	17.0	12.0
4.	Iron (as Fe)		mg/kg	TPM/MSK/P&E/1/13	54.0	12.0	8.0
5.	Manganese (as Mn)		mg/kg	EPA 610D	141.0	350.0	228.0
6.	Bulk Density		g/cc	IS 2720 (Part-29)-1975	1.25	1.18	1.25
7.	Cadmium (as Cd)		mg/kg	EPA 610D	<2.0	<2.0	<2.0
8.	Lead (as Pb)		mg/kg	EPA 610D	6.0	10.0	11.0
9.	Nickel (as Ni)		mg/kg	EPA 610D	10.0	22.0	19.0
10.	Total Chromium (as Cr)		mg/kg	EPA 610D	17.0	40.0	42.0
11.	Gravel		%	Lab Method	22.0	21.0	27.0
14.	Texture		----	TPM/MSK/P&E/1/36A	Sandy Loam	Loam	Sandy Loam
15.	Electrical Conductivity		us/cm	IS 14767:2000, RA 2016	1248.0	269.0	248.0
16.	Available Sodium (as Na)		mg/kg	TPM/MSK/P&E/1/4	66.0	253.0	12.0
17.	Available Potassium (as P)		mg/kg	TPM/MSK/P&E/1/5	93.0	300.0	2.12
18.	Total Nitrogen (as N)		mg/kg	IS 14684:1999, RA 2014	134.0	750.0	610.0
19.	Total Organic Carbon		%	IS 2720 (Part-22)-1972	0.15	0.58	0.45
20.	Organic Matter		%	IS 2720 (Part-22)-1972	0.26	1.0	0.78
21.	Sodium Adsorption Ratio		----	TPM/MSK/P&E/1/31	5.8	1.9	0.98
22.	Available Phosphorus (as P)		mg/kg	TPM/MSK/P&E/1/12	3.2	4.4	58.0
23.	Zinc (as Zn)		mg/kg	EPA 610D	17.0	32.0	28.0
24.	Water Holding Capacity		%	TPM/MSK/P&E/1/17	38.0	44.0	40.0
25.	Cation Exchange Capacity		meq/100g	IS 2720 (Part-24)-1974	13.0	16.0	14.0
26.	Total Porosity		%	TPM/MSK/P&E/1/30	54.7	47.9	46.5
27.	Phosphorus		mg/kg	TPM/MSK/P&E/1/12	138.0	241.0	411.0
28.	Infiltration Rate		mm/hr	Method of Analysis of Soil by HLS Tandon	7.4	8.1	9.6
29.	Particle Size Distribution	Sand	%	TPM/MSK/P&E/1/36A	53.0	37.0	46.0
		Silt			16.0	23.0	18.0
		Clay			9.0	19.0	9.0

Report Prepared By: S. Kaunga

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

Date: 01.01.2021

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001552
Type of Sample	Marine Water
Sampling Location	Dhamra River Mouth
Date of Sampling	19.12.2020
Date of Analysis	20.12.2020 to 31.12.2020
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	94.0	18.0
5	pH	----	APHA (23rd Edition) 4500-H-B	7.84	6.98
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	25400.0	28100.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	18520.0	19745.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	124.0	36.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	17924.0	18874.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3215.0	2960.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	621.0	567.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2641.0	2754.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	9557.0	10185.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.6	6.1
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.0	2.6
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	<4.0	12.4
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	309.0	287.0
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	1.6	0.89
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	0.47	0.56
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	3.8	ND
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.5	<0.5

Prepared By – S. Kanungo

MITRA S.K. PRIVATE LIMITED BBSR

Checked By- P Rudha

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

Date: 01.01.2021

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001552
Type of Sample	Marine Water
Sampling Location	Dry Bulk Cargo Berth Face
Date of Sampling	19.12.2020
Date of Analysis	20.12.2020 to 31.12.2020
Sampling Done by	Mr. Kunja Bihari Nayak

SL. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	---	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	40.0	52.0
5	pH	---	APHA (23rd Edition) 4500-H-B	7.22	7.58
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	30628.0	29568.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	23754.0	22457.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	67.0	74.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	22556.0	20094.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3245.0	3102.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	536.0	551.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2698.0	2548.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	10068.0	9587.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.5	6.0
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	3.4	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	15.8	10.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	278.0	251.0
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	1.8	1.0
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	0.49	0.34
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	3.4	ND
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.5	<0.5

Prepared By - S. Karunga

MITRA S.K. PRIVATE LIMITED BBSR

Checked By- P Prasad

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MSK
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Date: 01.01.2021

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001552**
Type of Sample	**Marine Water**
Sampling Location	**Liquid/Gas/Cyrogenic Berth Face**
Date of Sampling	**19.12.2020**
Date of Analysis	**20.12.2020 to 31.12.2020**
Sampling Done by	**Mr. Kunja Bihari Nayak**

SL. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	52.0	61.0
5	pH	----	APHA (23rd Edition) 4500-H-B	7.84	8.10
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	30422.0	32521.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	21931.0	23214.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	70.0	81.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	19564.0	20998.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3254.0	3466.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	528.0	602.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2649.0	2857.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	11328.0	10685.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.8	6.1
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	12.0	20.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	338.0	329.0
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	0.70	0.96
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	0.57	0.71
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	3.0	ND
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.5	<0.5

Prepared By – S. Kanungo

Checked By- P Pradhan

MITRA S.K. PRIVATE LIMITED BBSR

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MSK TESTING • INSPECTION

Date: 01.01.2021

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001552
Type of Sample	Marine Water
Sampling Location	Along Channel at 1Km
Date of Sampling	19.12.2020
Date of Analysis	20.12.2020 to 31.12.2020
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	36.0	41.0
5	pH	----	APHA (23rd Edition) 4500-H-B	6.89	7.17
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	29668.0	31687.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	20396.0	23212.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	54.0	78.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	19584.0	20481.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3187.0	3258.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	497.0	528.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2645.0	2718.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	11088.0	12622.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.0	5.6
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	16.0	<4.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	347.0	321.0
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	1.9	1.4
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	0.87	0.64
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	3.9	ND
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.5	<0.5

Prepared By – S. Kaunga

Checked By- P Prasad

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MSK TESTING • INSPECTION

Date: 01.01.2021

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001552**
Type of Sample	**Marine Water**
Sampling Location	**Along Channel at 5Km**
Date of Sampling	**19.12.2020**
Date of Analysis	**20.12.2020 to 31.12.2020**
Sampling Done by	**Mr. Kunja Bihari Nayak**

SL. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	25.0	25
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	61.0	110.0
5	pH	----	APHA (23rd Edition) 4500-H-B	7.80	7.36
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	14812.0	11741.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	11560.0	9369.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	84.0	196.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	9756.0	6726.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	987.0	1381.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	188.0	246.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	1057.0	1209.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	5895.0	3410.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.4	5.8
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	772.0	775.0
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	1.5	0.98
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	0.78	0.44
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	3.8	ND
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.5	<0.5

Prepared By – S. Karunge

Checked By- P Pradhan

MITRA S.K. PRIVATE LTD.

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MSK TESTING • INSPECTION

Date: 01.01.2021

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001552
Type of Sample	Marine Water
Sampling Location	Along Channel at 10Km
Date of Sampling	19.12.2020
Date of Analysis	20.12.2020 to 31.12.2020
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	101.0	138.0
5	pH	----	APHA (23rd Edition) 4500-H-B	7.04	7.38
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	10242.0	9481.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	6327.0	5918.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	210.0	288.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	5987.0	5274.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	874.0	920.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	198.0	218.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	598.0	622.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	3158.0	2758.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.0	5.4
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	2.8	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	10.7	<4.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	396.0	419.0
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	1.2	0.85
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	1.8	1.0
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	3.1	ND
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.5	<0.5

Prepared By – S. Ramya

Checked By- P Pradhan

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MSK TESTING • INSPECTION

Date: 01.01.2021

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001552**
Type of Sample	**Marine Water**
Sampling Location	**Near Kanika Island**
Date of Sampling	**19.12.2020**
Date of Analysis	**20.12.2020 to 31.12.2020**
Sampling Done by	**Mr. Kunja Bihari Nayak**

SL. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	80.0	62.0
5	pH	----	APHA (23rd Edition) 4500-H-B	7.55	7.67
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	16540.0	12197.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	10491.0	9453.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	102.0	186.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	9803.0	6760.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	1756.0	1196.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	388.0	294.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	1477.0	1287.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	6429.0	4966.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.8	6.2
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	7.0	8.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	872.0	611.0
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	1.6	1.0
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	1.8	2.1
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	3.4	ND
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.5	<0.5

Prepared By - S. Kanungo

Checked By- P Pradhan

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Date: 01.01.2021

PHYTOPLANKTONMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001552
Type of Sample	Marine Sample (Phytoplankton)
Sampling Location	S1:Dhamra River Mouth S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	19.12.2020
Date of Analysis	20.12.2020 to 31.12.2020
Sampling Done by	Mr. Kunja Bihari Nayak

Name of the Parameters		Total count	No of species	Chlorophyll-a	Major Species
Unit		Units/L	Nos.	mg/l	----
Testing Method		APHA 10200	APHA 10200	APHA 10200H	APHA (23rd Edition) 10200
Analysis Result					
S-1	Surface Water	24000	4	0.48	Navicula, Fragilaria
	Bottom water	21000	3	0.36	Cyclotella, Enteromorpha
S-2	Surface Water	24000	4	0.62	Nereocystis, Cladophora
	Bottom water	20000	3	0.54	Fragilaria, Nereocystis
S-3	Surface Water	20000	4	0.44	Desmium, Enteromorpha
	Bottom water	23000	4	0.38	Cyclotella, Phormidium
S-4	Surface Water	22000	5	0.56	Moueotia, Tribonema
	Bottom water	17000	2	0.40	Enteromorpha, Zostera
S-5	Surface Water	23000	5	0.69	Vallisneria, Navicula
	Bottom water	25000	4	0.46	Aphanizomenon, Phormidium
S-6	Surface Water	24000	4	0.52	Vallisneria, Desmium
	Bottom water	24000	4	0.68	Zostera, Nereocystis
S-7	Surface Water	18000	3	0.40	Cyclotella, Enteromorpha
	Bottom water	25000	5	0.61	Vallisneria, Enteromorpha

Prepared By – S. Kaungo

MITRA S.K. PRIVATE LIMITED BBSR

Checked By- [illegible]

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Date: 01.01.2021

ZOOPLANKTONMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001552
Type of Sample	Marine Sample (Zooplankton)
Sampling Location	S1:Dhamra River Mouth S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	19.12.2020
Date of Analysis	20.12.2020 to 31.12.2020
Sampling Done by	Mr. Kunja Bihari Nayak

Name of the Parameters		Total count	No of species	Major Species
Unit		Units/L	Nos.	----
Testing Method		APHA 10200	APHA 10200	APHA (23rd Edition) 10200
Analysis Result				
S-1	Surface Water	None	None	None
	Bottom water	None	None	None
S-2	Surface Water	2000	1	Brachionus
	Bottom water	None	None	None
S-3	Surface Water	2000	1	Daphnia
	Bottom water	3000	1	Bythotrephes longimanus
S-4	Surface Water	None	None	None
	Bottom water	None	None	None
S-5	Surface Water	2000	1	Daphnia
	Bottom water	1000	1	Nauplius
S-6	Surface Water	2000	1	Daphnia
	Bottom water	None	None	None
S-7	Surface Water	None	None	None
	Bottom water	2000	1	Monia

Prepared By – J. Kaungo

MITRA S.K. PRIVATE LIMITED BBSR

Checked By- P Pradhan

Mitra S. K. Private Limited

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Date: 01.01.2021

MICROBIOLOGICAL MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001552
Type of Sample	Marine Sample (Microbiological)
Sampling Location	S1:Dhamra River Mouth S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	19.12.2020
Date of Analysis	20.12.2020 to 31.12.2020
Sampling Done by	Mr. Kunja Bihari Nayak

Name of the Parameters		Total Bacteria count	Total Coliform	Faecal Coliform	E. coli	Enterococcus	Salmonella	Shigella	Vibrio
Unit		CFU/ml	MPN/100ml	MPN/100ml	MPN/100ml	CFU/ml	/100ml	/100ml	/100ml
Testing Method		APHA 5th Edn	APHA 9221 B	APHA 9221 E	APHA 9221 F	IS 5887(Part-II)	IS 5887(Part-III)	IS 5887(Part-VII)	IS 5887(Part-V)
Analysis Result									
S-1	Surface Water	68.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	31.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-2	Surface Water	140.0	9.2	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	70.0	Absent	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-3	Surface Water	170.0	14.0	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	60.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-4	Surface Water	58.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	137.0	15.0	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-5	Surface Water	89.0	6.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	50.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-6	Surface Water	69.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	80.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-7	Surface Water	40.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	80.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent

Prepared By – S. Kanungo

MITRA S.K. PRIVATE LIMITED BBSR

Checked By- P Pradh

Mitra S. K. Private Limited

Plot No. 178, Sec-A, Zone-B
Mancheswar Industrial Estate
Bhubaneswar-751 010
Odisha
CIN : U51909WB1956PTC023037

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MSK TESTING • INSPECTION

Date: 01.01.2021

TOTAL FAUNA MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001552
Type of Sample	Marine Sample
Sampling Location	S1:Dhamra River Mouth S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	19.12.2020
Date of Analysis	20.12.2020 to 31.12.2020
Sampling Done by	Mr. Kunja Bihari Nayak

Name of the Parameters		Name of phylum	Class & No. of individuals encountered	Total no of species encountered	Total fauna per m³
Testing Method		APHA 10700	APHA 10700	APHA 10700	APHA 10700
Analysis Result					
S-1	Surface Water	Annelida, Mollusca	Plychaeta-61,Bivalvia-12	84	128
	Bottom water	Annelida, Mollusca	Plychaeta-19,Bivalvia-34	67	174
S-2	Surface Water	Annelida, Mollusca	Plychaeta-11,Bivalvia-20	96	210
	Bottom water	Annelida, Mollusca	Plychaeta-14,Bivalvia-29	62	187
S-3	Surface Water	Anthropoda, Annelida	Plychaeta-20,Bivalvia-17	90	245
	Bottom water	Annelida, Mollusca	Plychaeta-33,Bivalvia-47	112	745
S-4	Surface Water	Annelida, Mollusca	Plychaeta-55,Bivalvia-35	78	368
	Bottom water	Annelida, Mollusca	Plychaeta-40,Bivalvia-12	128	940
S-5	Surface Water	Annelida, Mollusca	Plychaeta-66,Bivalvia-24	88	454
	Bottom water	Annelida, Mollusca	Plychaeta-60,Bivalvia-20	94	548
S-6	Surface Water	Anthropoda, Annelida	Malagostraca-39,Pelecypoda-64	128	980
	Bottom water	Annelida, Mollusca	Plychaeta-65,Gastropoda-22	64	214
S-7	Surface Water	Anthropoda, Annelida	Malagostraca-28,Pelecypoda-19	109	843
	Bottom water	Anthropoda, Annelida	Plychaeta-65,Gastropoda-22	49	380

Prepared By - S. Kaunge

MITRA S.K. PRIVATE LIMITED BBSR

Checked By- [illegible]

Mitra S. K. Private Limited

Plot No. 178, Sec-A, Zone-B
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MSK TESTING • INSPECTION

Date: 01.01.2021

PRIMARY PRODUCTIVITYMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001552
Type of Sample	Marine Sample (Productivity)
Date of Sampling	19.12.2020
Date of Analysis	20.12.2020 to 31.12.2020
Sampling Done by	Mr. Kunja Bihari Nayak

SL No.	Monitoring Location		Gross Primary productivity (O2mg/L/day)	Net Primary productivity (O2mg/L/day)
1	S1:Dhamra River Mouth	Surface Water	3.6	1.8
		Bottom water	3.2	1.4
2	S2:Dry Bulk Cargo Berth Face	Surface Water	2.8	1.2
		Bottom water	2.4	1.7
3	S3:Liquid/Gas/Cyrogenic Berth Face	Surface Water	3.0	2.1
		Bottom water	3.8	2.4
4	S4:Along Channel at 1Km	Surface Water	3.4	2.0
		Bottom water	3.1	1.9
5	S5:Along Chanel at 5Km	Surface Water	3.8	2.6
		Bottom water	3.1	1.8
6	S6: Along Channel at 10Km	Surface Water	2.7	1.5
		Bottom water	3.2	1.7
7	S7:Near Kanika Island	Surface Water	2.6	1.2
		Bottom water	2.0	1.1

Prepared By - S. Kaungo

Checked By- P Pradhan

MITRA S.K. PRIVATE LIMITED BBSR

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

Date: 01.01.2021

PHYTO BENTHOSMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001552
Type of Sample	Marine Sample
Sampling Location	S1:Dhamra River Mouth S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	19.12.2020
Date of Analysis	20.12.2020 to 31.12.2020
Sampling Done by	Mr. Kunja Bihari Nayak

Name of the Parameters		Fungus	Total Count	No of species	Diversity Index	Major species
Unit		CFU/g dry wt.	50 mg wet sediment	Nos.	--	--
Testing Method		APHA 9610 B	APHA 9215 B,C	APHA 10500 B	By Calculation (Shanon's Index)	APHA 10500 B
Analysis Result						
S-1	Surface Water	3100	248	14	0.7987	Ditylum, Ctenophora
	Bottom water	2700	285	17	0.6785	Podasira
S-2	Surface Water	2400	229	16	0.7105	N.longsigma, Copepods
	Bottom water	1420	187	7	0.4875	Podasira, N.longsigma
S-3	Surface Water	2500	275	18	0.7821	Ctenophora, Copepods
	Bottom water	1100	197	9	0.4867	N.longsigma
S-4	Surface Water	2700	274	31	0.8549	Ditylum, Copepods
	Bottom water	2100	212	17	0.6882	N.longsigma, Echinodermata
S-5	Surface Water	26000	396	36	1.8426	Podasira, Copepods
	Bottom water	2000	218	14	0.7562	Ditylum, Echinodermata
S-6	Surface Water	2400	232	11	0.9288	Podasira, Ditylum
	Bottom water	2100	372	26	0.9964	Echinodermata, Copepods
S-7	Surface Water	1900	290	7	0.6524	N.longsigma, Podasira
	Bottom water	1230	178	5	0.4817	Ctenophora

Prepared By – S. Kanungo

MITRA S.K. PRIVATE LIMITED BBSR

Checked By- P Pradhan

Mitra S. K. Private Limited

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MSK
TESTING - INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/431
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/00654
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 03.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	8.01
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2160.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.8
4.	Moisture content	%	Lab Method	38.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1357.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	464.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	12.0
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	5.2
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	27.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1432.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	334.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	21.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	28.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	31.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	361.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/431

Date- 01.01.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	10.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	7541.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	52.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	625.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	489.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	32.0
26.	Silt	%	TPM/MSK/P&E/1/36A	26.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	30.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1689
2.	Total count (Phytobenthos)	50 mg wet sediment	321
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	----	1.74
5.	Major Species (phytobenthos)	----	*Coscinodiscus* sp.,*Biddulphia mobilensis*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-31,Bivalvia-24
8.	Total no. of species encountered (Fauna)	Nos.	27
9.	Total fauna (Fauna)	per m^3	210

S. Karunya
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S.K. Private Limited
P Pradhan
Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/432
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/00655
Sample Description : Sea Sediment
Sampling Location : Dredging Source Area
Date of sampling : 03.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.84
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1989.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.4
4.	Moisture content	%	Lab Method	22.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1544.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	521.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	14.0
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.8
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	33.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1410.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	294
13.	Copper (as Cu)	mg/kg	EPA 6010D	22.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	25.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	35.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	388.0

MSK TESTING • INSPECTION

Ref. No. BBS/432

Date- 01.01.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	12.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	6548.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	53.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	721.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	536.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	34.0
26.	Silt	%	TPM/MSK/P&E/1/36A	24.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	24.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1521
2.	Total count (Phytobenthos)	50 mg wet sediment	321
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	1.91
5.	Major Species (phytobenthos)	----	*Biddulphia mobilensis, Gyrosigma* sp.
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-66,Bivalvia-09
8.	Total no. of species encountered (Fauna)	Nos.	32
9.	Total fauna (Fauna)	per m^3	197

S. Kaunga
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S.K. Private Limited
Authorized Signatory

Mitra S. K. Private Limited

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CIN : U51909WB1958PTC023037

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MSK TESTING + INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/433
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01175
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 19.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffin:2011	7.88
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffin:2006	1879.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffin:2015	1.0
4.	Moisture content	%	Lab Method	40.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1574.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	526.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	14.0
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.8
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	29.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1409.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	359.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	23.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	29.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	30.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	451.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/433

Date- 01.01.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	12.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	6289.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	26.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	412.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	364.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	36.0
26.	Silt	%	TPM/MSK/P&E/1/36A	24.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	31.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1471
2.	Total count (Phytobenthos)	50 mg wet sediment	302
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	----	1.66
5.	Major Species (phytobenthos)	----	*Coscinodiscus* sp.,*Biddulphia mobilensis, Spirulina aeruginea*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-51,Bivalvia-20
8.	Total no. of species encountered (Fauna)	Nos.	24
9.	Total fauna (Fauna)	per m^2	236

S. Kamaro
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S.K. Private Limited
Authorized Signatory

Mitra S. K. Private Limited

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CIN : U51909WB1956PTC023037

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MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/434
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01176
Sample Description : Sea Sediment
Sampling Location : Dredging Source Site
Date of sampling : 19.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.98
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1745.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.6
4.	Moisture content	%	Lab Method	37.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1597.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	601.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	16.0
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.1
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	35.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1469.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	319.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	21.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	26.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	34.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	396.0

MSK TESTING • INSPECTION

Ref. No. BBS/434

Date- 01.12.2020

17.	Lead (as Pb)	mg/kg	EPA 6010D	12.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	7258.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	50.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	691.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	562.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	39.0
26.	Silt	%	TPM/MSK/P&E/1/36A	27.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	31.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1274
2.	Total count (Phytobenthos)	50 mg wet sediment	316
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	---	1.48
5.	Major Species (phytobenthos)	—	*Biddulphia mobilensis, Gyrosigma* sp., *Nizschia distans*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Plychaeta-44,Bivalvia-18
8.	Total no. of species encountered (Fauna)	Nos.	30
9.	Total fauna (Fauna)	per m^3	184

S. Kanungo
Report Prepared by

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S.K. Private Limited
P Prasad
Authorized Signatory

Mitra S. K. Private Limited

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MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/435
Date : 01.01.2020
Sample No. : MSKGL/ED/2020-21/12/01168
Sample Description : Sea Sediment
Sampling Location : Dhamra River Mouth
Date of sampling : 19.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rflm:2011	7.44
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rflm:2006	2658.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rflm:2015	2.18
4.	Moisture content	%	Lab Method	30.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1188.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	461.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	8.0
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	5.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2023.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	380.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	4.1
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.41
15.	Zinc (as Zn)	mg/kg	EPA 6010D	4.6
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

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Ref. No. BBS/435

Date- 01.01.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	3.2
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	4.04
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	3.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	2.9
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	1.7
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	38.0
26.	Silt	%	TPM/MSK/P&E/1/36A	26.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	36.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1978
2.	Total count (Phytobenthos)	50 mg wet sediment	167
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	0.8455
5.	Major Species (phytobenthos)	----	*Coscinodiscuss,*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-24,Bivalvia-11
8.	Total no. of species encountered (Fauna)	Nos.	39
9.	Total fauna (Fauna)	per m^3	156

S. Kamuga
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MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S.K. Private Limited
Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/436
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01169
Sample Description : Sea Sediment
Sampling Location : Dry Bulk Cargo Berth Face
Date of sampling : 19.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	8.10
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2988.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.22
4.	Moisture content	%	Lab Method	27.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1207.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	263.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	7.7
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	6.4
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2025.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	425.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	3.3
14.	Nickel (as Ni)	mg/kg	EPA 6010D	0.87
15.	Zinc (as Zn)	mg/kg	EPA 6010D	3.6
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

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Date- 01.01.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	1.67
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	4.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	1.97
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	3.8
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	1.2
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	39.0
26.	Silt	%	TPM/MSK/P&E/1/36A	32.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	29.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	2154
2.	Total count (Phytobenthos)	50 mg wet sediment	213
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	0.9130
5.	Major Species (phytobenthos)	----	*Navicula, Coscinodiscuss, Pleurosigma*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-57,Bivalvia-24
8.	Total no. of species encountered (Fauna)	Nos.	58
9.	Total fauna (Fauna)	per m^3	312

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/437
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01170
Sample Description : Sea Sediment
Sampling Location : Liquid/Gas/Cyrogenic Berth Face
Date of sampling : 19.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.67
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3970.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.87
4.	Moisture content	%	Lab Method	40.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	749.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	601.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	5.9
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1951.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	761.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	3.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.45
15.	Zinc (as Zn)	mg/kg	EPA 6010D	2.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

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Ref. No. BBS/437

Date- 01.01.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	3.8
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	2.8
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.1
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	4.3
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	1.71
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	31.0
26.	Silt	%	TPM/MSK/P&E/1/36A	28.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	41.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1389
2.	Total count (Phytobenthos)	50 mg wet sediment	227
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	0.8794
5.	Major Species (phytobenthos)	----	*Coscinodiscuss, Pleurosigma* ,
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-49,Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	34
9.	Total fauna (Fauna)	per m^3	232

S. Kaunge
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

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MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/438
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01171
Sample Description : Sea Sediment
Sampling Location : Along Channel at 1 km
Date of sampling : 19.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.89
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	6234.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	2.56
4.	Moisture content	%	Lab Method	40.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	589.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	658.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	3.2
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	124.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2897.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	875.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	2.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.9
15.	Zinc (as Zn)	mg/kg	EPA 6010D	3.8
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

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Ref. No. BBS/438

Date- 01.01.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	1.4
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	2.6
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.4
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	6.4
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	2.9
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	37.0
26.	Silt	%	TPM/MSK/P&E/1/36A	24.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	39.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1875
2.	Total count (Phytobenthos)	50 mg wet sediment	214
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	0.7895
5.	Major Species (phytobenthos)	----	*Bidulphia, Coscinodiscuss,*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-30,Bivalvia-17
8.	Total no. of species encountered (Fauna)	Nos.	39
9.	Total fauna (Fauna)	per m^3	241

S. Kaungo
Report Prepared By:

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/439
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01172
Sample Description : Sea Sediment
Sampling Location : Along Channel at 5 km
Date of sampling : 19.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.66
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	6254.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.2
4.	Moisture content	%	Lab Method	34.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	587.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	569.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	3.2
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	94.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2997.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	735.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	2.9
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.7
15.	Zinc (as Zn)	mg/kg	EPA 6010D	4.2
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

MSK TESTING • INSPECTION

Ref. No. BBS/439

Date- 01.01.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	2.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	2.4
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	3.6
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	6.1
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	2.8
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	32.0
26.	Silt	%	TPM/MSK/P&E/1/36A	28.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	40.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1784
2.	Total count (Phytobenthos)	50 mg wet sediment	244
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	----	1.2451
5.	Major Species (phytobenthos)	----	*Coscinodiscuss, Navicula,Gyrosigma*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-67,Bivalvia-22
8.	Total no. of species encountered (Fauna)	Nos.	62
9.	Total fauna (Fauna)	per m^3	238

S. Kaungo
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MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S.K. Private Limited
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MSK
TESTING - INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/440
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/09/01173
Sample Description : Sea Sediment
Sampling Location : Along Channel at 10 km
Date of sampling : 19.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	8.01
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	BDL
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.36
4.	Moisture content	%	Lab Method	41.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	691.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	578.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	228.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	3514.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	996.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	2.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.4
15.	Zinc (as Zn)	mg/kg	EPA 6010D	5.1
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

MSK TESTING • INSPECTION

Ref. No. BBS/440

Date- 01.01.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	1.6
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	2.4
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.3
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	6.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.8
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	36.0
26.	Silt	%	TPM/MSK/P&E/1/36A	29.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	35.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1289
2.	Total count (Phytobenthos)	50 mg wet sediment	276
3.	No of species (Phytobenthos)	Nos.	11
4.	Diversity index (Phytobenthos)	----	1.1254
5.	Major Species (phytobenthos)	----	*Bidulphia, Coscinodiscuss sp.,*
6.	Name of Phylum (Fauna)	----	Anthropoda, Annelida
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-48,Bivalvia-15
8.	Total no. of species encountered (Fauna)	Nos.	37
9.	Total fauna (Fauna)	per m^2	251

S. Kaunge
Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S.K. Private Limited
PPradhan
Authorized Signatory

Mitra S. K. Private Limited

Plot No. 178, Sec-A, Zone-B
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MSK
TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/441
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01174
Sample Description : Sea Sediment
Sampling Location : Near Kanika Island
Date of sampling : 19.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.91
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	6154.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	2.48
4.	Moisture content	%	Lab Method	32.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	400.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	574.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	4.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2941.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	669.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	2.8
14.	Nickel (as Ni)	mg/kg	EPA 6010D	0.89
15.	Zinc (as Zn)	mg/kg	EPA 6010D	2.2
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

MSK TESTING • INSPECTION

Ref. No. BBS/441

Date- 01.01.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	1.8
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	2.7
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	3.4
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	4.1
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	41.0
26.	Silt	%	TPM/MSK/P&E/1/36A	34.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loan
28.	Clay	%	TPM/MSK/P&E/1/36A	25.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1789
2.	Total count (Phytobenthos)	50 mg wet sediment	271
3.	No of species (Phytobenthos)	Nos.	12
4.	Diversity index (Phytobenthos)	----	1.2954
5.	Major Species (phytobenthos)	----	*Bidulphia,Navicula Synedra,*
6.	Name of Phylum (Fauna)	----	Anthropoda, Annelida
7.	Class & Number of individuals encountered (Fauna)	—	Malagostraca-21,Pelecypoda-07
8.	Total no. of species encountered (Fauna)	Nos.	34
9.	Total fauna (Fauna)	per m^3	412

S. Karunga
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For Mitra S.K. Private Limited
Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/450
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01128
Sample Description : Hazardous Wastes
Sampling Location : Used Oil
Date of sampling : 09.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Limit as per Schedule –V (Part – A) of Hazardous Waste Rule,2016	Test Method	Result
1.	Lead (as Pb)	mg/l	100.0	USEPA 3031	<2.0
2.	Arsenic (as As)	mg/l	5.0	USEPA 3031	<0.25
3.	Cadmium + Chromium + Nickel (Cd + Cr + Ni)	mg/l	500.0	USEPA 3031	<2.0
4.	Cadmium (as Cd)	mg/l	----	USEPA 3031	<2.0
5.	Chromium (as Cr)	mg/l	----	USEPA 3031	<2.0
6.	Nickel (as Ni)	mg/l	----	USEPA 3031	<2.0
7.	Polychlorinated Biphenyls (as PCB)	mg/l	<2.0	ASTM D 6160 -98 (Reapproved 2011)	<1.0
8.	Polynuclear Aromatic Hydrocarbons (as PAH)	%	6.0	ASTM D 5412 -93 (Reapproved 2011)	<0.01

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/451
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01129
Sample Description : Hazardous Wastes
Sampling Location : Waste Oil
Date of sampling : 08.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Limit as per Schedule –V (Part – B) of Hazardous Waste Rule,2016	Test Method	Result
1.	Lead (as Pb)	mg/l	100.0	USEPA 3031	<2.0
2.	Arsenic (as As)	mg/l	5.0	USEPA 3031	<0.25
3.	Cadmium + Chromium + Nickel (Cd + Cr + Ni)	mg/l	500.0	USEPA 3031	15.0
4.	Cadmium (as Cd)	mg/l	----	USEPA 3031	<2.0
5.	Chromium (as Cr)	mg/l	----	USEPA 3031	<2.0
6.	Nickel (as Ni)	mg/l	----	USEPA 3031	15.0
7.	Polychlorinated Biphenyls (as PCB)	mg/l	<2.0	ASTM D 6160 -98 (Reapproved 2011)	<1.0
8.	Polynuclear Aromatic Hydrocarbons (as PAH)	%	6.0	ASTM D 5412 -93 (Reapproved 2011)	<0.01

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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/452
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01130
Sample Description : Hazardous Wastes
Sampling Location : Wastes Oil Containing Filter
Date of sampling : 09.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	Lead (as Pb)	mg/l	EPA 1311	<0.1
2.	Arsenic (as As)	mg/l	EPA 1311	<0.02
3.	Cadmium (as Cd)	mg/l	EPA 1311	<0.1
4.	Chromium (as Cr)	mg/l	EPA 1311	<0.1
5.	Nickel (as Ni)	mg/l	EPA 1311	<0.1
6.	Polychlorinated Biphenyls (as PCB)	mg/l	ASTM D 6160 -98 (Reapproved 2011)	<1.0
7.	Polynuclear Aromatic Hydrocarbons (as PAH)	%	ASTM D 5412 -93 (Reapproved 2011)	<0.01

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MSK TESTING - INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/453
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01131
Sample Description : Hazardous Wastes
Sampling Location : Filter
Date of sampling : 09.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	Cadmium (as Cd)	mg/kg	USEPA 3031	24.0
2.	Lead (as Pb)	mg/kg	USEPA 3031	50.0
3.	Nickel (as Ni)	mg/kg	USEPA 3031	17.0
4.	Polychlorinated Biphenyls (as PCB)	mg/kg	ASTM D 6160 -98 (Reapproved 2011)	<1.0
5.	Polynuclear Aromatic Hydrocarbons (as PAH)	%	ASTM D 5412 -93 (Reapproved 2011)	<0.01
6.	Arsenic (as As)	mg/kg	USEPA 3031	<0.25
7.	Total Chromium (as Cr)	mg/kg	USEPA 3031	26.0

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For Mitra S. K. Private Limited.

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/454
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01132
Sample Description : Hazardous Wastes
Sampling Location : Incininerator Ash
Date of sampling : 07.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	Cadmium (as Cd)	mg/kg	USEPA 3031	<2.0
2.	Lead (as Pb)	mg/kg	USEPA 3031	51.0
3.	Nickel (as Ni)	mg/kg	USEPA 3031	334.0
4.	Polychlorinated Biphenyls (as PCB)	mg/kg	ASTM D 6160 -98 (Reapproved 2011)	<1.0
5.	Polynuclear Aromatic Hydrocarbons (as PAH)	%	ASTM D 5412 -93 (Reapproved 2011)	<0.01
6.	Arsenic (as As)	mg/kg	USEPA 3031	<0.25
7.	Total Chromium (as Cr)	mg/kg	USEPA 3031	147.0

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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/455
Date : 01.01.2021
Sample No. : MSKGL/ED/2020-21/12/01133
Sample Description : Hazardous Wastes
Sampling Location : Chimney Exhaust Carbon Dust
Date of sampling : 07.12.2020

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	Cadmium (as Cd)	mg/kg	USEPA 3031	3.3
2.	Lead (as Pb)	mg/kg	USEPA 3031	53.0
3.	Nickel (as Ni)	mg/kg	USEPA 3031	1278.0
4.	Polychlorinated Biphenyls (as PCB)	mg/kg	ASTM D 6160 -98 (Reapproved 2011)	<1.0
5.	Polynuclear Aromatic Hydrocarbons (as PAH)	%	ASTM D 5412 -93 (Reapproved 2011)	<0.01
6.	Arsenic (as As)	mg/kg	USEPA 3031	<0.25
7.	Total Chromium (as Cr)	mg/kg	USEPA 3031	38.0

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Report Prepared by:

For Mitra S. K. Private Limited.

MITRA S.K. PRIVATE LIMITED BBSR

P Pradhan
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MONTHLY ENVIRONMENT MONITORING REPORT

JANUARY- 2021

Directed by

THE DHAMRA PORT COMPANY LIMITED

adani

Ports and Logistics

AT : DOSINGA, PO : DHAMRA
DIST- BHADRAK, PIN : 756171 ODISHA

Conducted by

M/s. Mitra S. K. Private Limited

MSK TESTING • INSPECTION

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MSK TESTING & INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001700
Type of Sample	Ambient Air Sample
Sampling Location	Colony
Sampling Done by	Mr. Kunja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_x (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
03.01.2021	53.0	30.0	6.3	18.2	0.48	16.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.01.2021	57.2	32.1	6.7	22.3	0.59	18.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.01.2021	55.8	30.9	6.1	19.3	0.41	17.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.01.2021	54.0	31.2	7.2	25.7	0.69	22.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.01.2021	56.4	33.0	6.8	20.6	0.54	16.9	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.01.2021	55.5	29.4	7.0	24.2	0.66	20.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.01.2021	55.0	27.4	6.4	17.6	0.61	15.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.01.2021	56.1	31.1	6.9	23.7	0.57	19.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.01.2021	54.0	33.0	6.6	21.5	0.62	16.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	55.22	30.90	6.6	21.45	0.57	18.14	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi AAQ Standard	100	60	80	80	4	400	180	1	20	6	5	1
Time Weighted Average (hrs.)	24	24	24	24	1	24	1	24	Annual	Annual	Annual	Annual
TEST METHOD	IS 5182: Part 23:2006 (Reaff. 2012	IS 5182: Part 24:2019	IS 5182 : Part 2 :2001 (Reaff. 2012	IS 5182 : Part 6 :2006 (Reaff. 2012)	IS 5182 : Part 10 :1999 (Reaff.2014)	IS 5182: Part 25:2018	IS 5182: Part 09:1974	EPA - IO3.4June,1999	EPA - IO3.4June,1999	EPA - IO3.4June,1999	IS:5182(Part-11):2006 Reaff,2012	IS:5182(Part-12):2004 Reaff,: 2014

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gazt. Notification

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001700**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Kanakprasad**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_x (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
03.01.2021	52.8	28.0	6.1	19.3	0.42	14.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.01.2021	61.4	29.1	6.8	26.5	0.58	20.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.01.2021	57.2	31.2	6.5	18.3	0.49	15.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.01.2021	60.8	30.2	6.7	24.6	0.64	19.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.01.2021	55.4	29.1	6.4	18.5	0.51	16.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.01.2021	59.8	30.0	6.6	22.3	0.60	18.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.01.2021	64.8	31.6	7.0	27.3	0.74	24.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.01.2021	56.2	33.4	6.3	21.6	0.43	15.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.01.2021	54.3	32.0	6.2	17.6	0.55	14.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**58.07**	**30.51**	**6.5**	**21.78**	**0.55**	**17.67**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff. 2012**	**IS 5182 : Part 6 :2006 (Reaff. 2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182(Part-11):2006 Reaff,2012**	**IS:5182(Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By

Checked By-

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MSK
TESTING & INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001700**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near BMH**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
03.01.2021	61.2	33.1	6.2	19.4	0.49	16.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.01.2021	58.0	30.0	6.4	20.5	0.57	18.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.01.2021	61.0	39.5	6.7	22.4	0.68	19.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.01.2021	66.0	30.1	6.9	24.2	0.66	21.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.01.2021	63.5	30.2	7.3	26.7	0.74	23.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.01.2021	66.0	29.7	6.3	21.3	0.61	17.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.01.2021	62.1	34.1	6.8	25.4	0.71	22.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.01.2021	67.1	33.0	6.4	18.7	0.40	15.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.01.2021	65.0	35.0	6.1	17.5	0.42	14.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**63.32**	**32.74**	**6.5**	**21.78**	**0.58**	**18.85**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff.2012**	**IS:5182 (Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001700**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Jetty**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
03.01.2021	81.2	40.0	6.6	24.1	0.61	19.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.01.2021	82.1	43.2	7.6	28.4	0.79	26.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.01.2021	83.0	41.0	7.5	27.6	0.74	24.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.01.2021	80.0	44.1	6.8	23.4	0.58	17.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.01.2021	84.0	39.6	6.4	21.5	0.51	18.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.01.2021	85.0	43.4	7.1	26.3	0.70	23.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.01.2021	85.6	41.6	7.0	25.2	0.66	21.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.01.2021	86.1	42.0	6.9	24.8	0.60	20.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.01.2021	85.9	43.8	6.7	20.5	0.55	16.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**83.65**	**42.07**	**6.9**	**24.64**	**0.63**	**21.02**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June.1999**	**EPA - IO3.4June.1999**	**IS:5182 (Part-11):2006 Reaff.2012**	**IS:5182 (Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gazt. Notification

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MSK TESTING & INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/001700**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Dosinga**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Latu Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
03.01.2021	52.1	31.0	6.2	19.2	0.45	17.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.01.2021	50.6	30.0	7.0	25.1	0.72	22.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.01.2021	47.9	29.1	6.9	23.6	0.65	21.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.01.2021	53.1	27.6	6.3	20.1	0.57	18.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.01.2021	55.0	29.4	6.4	22.1	0.61	19.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.01.2021	57.1	32.1	7.2	26.7	0.77	25.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.01.2021	49.2	34.0	6.5	18.6	0.51	15.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.01.2021	51.3	30.9	6.0	17.8	0.49	14.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.01.2021	52.6	33.0	6.7	24.5	0.68	20.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**52.10**	**30.78**	**6.5**	**21.96**	**0.60**	**19.40**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff.2012**	**IS:5182 (Part-12):2004 Reaff.: 2014**

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MSK TESTING • INSPECTION

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/001700
Type of Sample	Ambient Air Sample
Sampling Location	Near Bhitarkanika
Sampling Done by	Mr. Kunja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_x ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
03.01.2021	48.6	29.0	6.1	19.7	0.44	16.2	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.01.2021	52.0	31.0	7.3	26.4	0.75	24.3	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.01.2021	52.0	32.0	6.9	24.6	0.68	21.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.01.2021	54.1	34.0	6.3	20.5	0.54	17.5	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.01.2021	53.0	29.5	6.5	21.6	0.59	18.4	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.01.2021	55.0	31.0	6.2	18.4	0.41	15.7	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.01.2021	53.2	33.0	6.7	22.5	0.57	19.1	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.01.2021	51.6	32.2	6.4	17.6	0.49	14.6	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.01.2021	50.3	34.1	6.6	23.5	0.52	16.8	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**52.20**	**31.75**	**6.5**	**21.64**	**0.55**	**18.24**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gazt. Notification

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/901
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00633
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 03.01.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	–	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	—	–	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	—	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.10	7.66
4.	Appearance	—	–	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	130.0	<2.5
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	41.0	4.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	159.0	14.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	7.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	39.0	2.8
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	48.0	7.0
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2500.0	700.0

Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

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MSK TESTING & INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
6DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/902
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00635
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 03.01.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	---	—	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	—	6.5 - 9.0	APHA (23rd Edition) 4500 H-B	7.15	7.59
4.	Appearance	—	—	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	35.0	<2.5
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	36.0	5.2
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	135.0	20.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	5.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	32.0	2.1
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	41.0	6.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1200.0	85.0

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/903
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/01108
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 18.01.2021

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	–	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	---	–	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.07	7.41
4.	Appearance	---	–	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	96.0	<2.5
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	33.0	8.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	131.0	30.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	8.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	21.0	3.1
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rflm:2014	30.0	4.3
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2100.0	75.0

Report Prepared by:

For Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/904
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/01110
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 18.01.2021

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	—	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	—	—	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	—	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.22	7.54
4.	Appearance	—	—	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	26.0	<2.5
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	32.0	8.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	128.0	24.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	4.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	16.0	1.4
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	24.0	2.5
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2100.0	90.0

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Report Prepared by:

For Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/905
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00960
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day L Time dB(A)			Night Time L dB(A)		
			MAX	MIN	AVG.	MAX	MIN	AVG.
1.	02.01.2021	Colony	50.6	39.7	42.8	41.0	36.6	38.5
2.	04.01.2021	Kanakprasad	51.7	38.5	41.4	41.8	35.1	37.8
3.	07.01.2021	Near BMH	67.4	56.2	59.8	59.8	48.2	52.4
4.	09.01.2021	Jetty	69.3	61.1	64.3	62.5	57.0	62.6
5.	11.01.2021	Dosinga	50.6	41.8	48.2	40.6	35.1	38.4
6.	12.01.2021	Near Bhitarkanika	46.0	39.1	41.2	37.5	32.0	36.7

Noise Limit as per CPCB

Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time	NOTE :
Industrial Area	75	70	Day Time : 06.00 Hr.-22.00 Hr.
Commercial Area	65	55	Night Time:22.00 Hr.-06.00 Hr.
Residential Area	55	45	
Silence Zone	50	40	

S. Kanungo
Report Prepared by

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited
N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN : U51909WB1956PTC023037]

T : (0674) 2362916, 2360917
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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/906
Date : 01.02.2020
Sample No. : MSKGL/ED/2020-21/12/01410
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg Leq dB(A)
1.	03.01.2021	Stack Yard	86.3	54.0	60.1
2.	05.01.2021	Wagon Tippler	80.5	56.6	60.8
3.	10.01.2021	Near Silo	84.6	71.0	68.1
4.	21.01.2021	Near Stacker & Reclaimer	87.2	45.9	63.4
5.	14.01.2021	Project Area	76.8	57.0	66.4
6.	16.01.2021	Transfer Point	85.6	53.9	65.8
7.	23.01.2021	Workshop	86.0	53.8	70.2
8.	18.01.2021	Steel Yard	85.9	43.0	61.2
9.	19.01.2021	FCC Shed	78.5	49.6	61.8
10.	20.01.2021	Near Port Canteen	81.2	52.8	69.2

OSHA'S Permissible Noise Exposure Limits	
Noise Level	**Exposure Limit**
90 dBA	**8.0 hours**

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING & INSPECTION

Ref : **MSKGL/FD/2020-21/001900**

Date : **01.02.2021**

GROUND WATER LEVEL MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/FD/2020-21/001900**
Type of Sample	**Piezometric Well**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	14.01.2021	12.04
2	Near WTP	14.01.2021	10.17

Report Prepared by

For Mitra S. K. Private Limited.

Authorized Signatory

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MSK TESTING & INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, 756171 ODISHA

Report No. : BBS/907
Date : 01.02.2021
Sample No. : MSKGL/FD/2020-21/01/00152
Date of sampling : 14.01.2021
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.77
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	13.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	34.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	72.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	364.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	170.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	26.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	193.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	166.0

Mitra S. K. Private Limited

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Ref. No. BBS/907

Date- 01.02.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kanungo
Report Prepared by

For Mitra S. K. Private Limited.

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/908
Date : 01.02.2021
Sample No. : MSKGL/FD/2020-21/01/00153
Date of sampling : 14.01.2021
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.72
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	10.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	39.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	76.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	315.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	165.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	20.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	180.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	—	—	IS 3025 (Part 14)- 2013	186.0

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

Ref. No. BBS/908

Date- 01.02.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Karunge
Report Prepared By:

For Mitra S. K. Private Limited.

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING & INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/909
Date : 01.02.2021
Sample No. : MSKGL/FD/2020-21/01/00154
Date of sampling : 14.01.2021
Sampling Description : Ground Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.68
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	9.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	42.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm.2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	68.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	308.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	150.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	22.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	184.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	218.0

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Ref. No. BBS/909

Date- 01.02.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991, Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. Kaunge
Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

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MSK TESTING & INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/910
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00850
Sample Description : VOC Monitoring

ANALYSIS

Sl. No	Date of Monitoring	Sampling Location	Method of Analysis	Parameter	Result
1.	06.01.2021	Jetty	NIOSH-1501	Volatile Organic Compound (VOC in mg/m³)	<0.008
2.	07.01.2021	Wagon Tippler			<0.008
3.	09.01.2021	Near Silo			<0.008
4.	09.01.2021	Transfer Point			<0.008
5.	10.01.2021	BMH Workshop			<0.008
6.	10.01.2021	Steel Yard			<0.008
7.	16.01.2021	FCC Shed			<0.008
8.	16.01.2021	SS 6 Office			<0.008

Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited
N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN : U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/911
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00993
Sample Description : Indoor Air Quality
Date of sampling : 04.01.2021
Sampling Location : SS-6 Building 2nd Floor

ANALYSIS RESULT

Sl. No	POLLUTANT	UNIT	RESULT	LIMIT AS PER OSHA	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10μm)	mg/m^3	0.026	15	IS: 5182 (Part-23)
2.	Particulate Matter (<2.5μm)	mg/m^3	0.015	5	TPM/MSK/ENV(AP)/01/03
3.	Temperature	Deg C	27-31	---	IS: 3025 (Part-9)
4.	Humidity	%	66-74	---	By Calculation
5.	VOC	mg/m^3	<0.008	---	NIOSH-1501
6.	Carbon monoxide (CO)	ppm	0.52	50	IS: 5182 (Part-10)
7.	Oxygen (O_2)	%	18.8	---	IS: 13270:1992
8.	Carbon-Dioxide (CO_2)	ppm	510.0	5000	IS: 5182 (Part-10)
9.	HCHO	ppm	0.24	0.75	NIOSH-2016

Air Exposure Plates for Microbial Count (Bacteria)

Media used:- Plate Count Agar (Total Bacterial Count)
Exposure time:- 30 mins
Incubation temp/time:- 30^0C/72 hrs
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	41	35	46	37	30
Total count	41	35	46	37	30

Air Exposure Plates Count for Fungi

Media used:- Chloramphenicol Yeast (Glucose) (Yeast & Mould Count)
Exposure time:- 30 mins
Incubation temp/time:- 25^0C/5 days
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	Yeast - 0 Mould – 7	Yeast -0 Mould – 10	Yeast - 0 Mould – 9	Yeast - 0 Mould – 7	Yeast - 0 Mould – 5
Total count	7	10	9	7	5

Report Prepared by: S. Kanungo

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING & INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/912
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00998
Sample Description : Indoor Air Quality
Date of sampling : 04.01.2021
Sampling Location : SS-6 Building 3rd Floor

ANALYSIS RESULT

Sl. No	POLLUTANT	UNIT	RESULT	LIMIT AS PER OSHA	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10µm)	mg/m^3	0.024	15	IS: 5182 (Part-23)
2.	Particulate Matter (<2.5µm)	mg/m^3	0.014	5	TPM/MSK/ENV(AP)/01/03
3.	Temperature	Deg C	28-32	---	IS: 3025 (Part-9)
4.	Humidity	%	64-70	---	By Calculation
5.	VOC	mg/m^3	<0.008	---	NIOSH-1501
6.	Carbon monoxide (CO)	ppm	0.48	50	IS: 5182 (Part-10)
7.	Oxygen (O_2)	%	18.5	---	IS: 13270:1992
8.	Carbon-Dioxide (CO_2)	ppm	520.0	5000	IS: 5182 (Part-10)
9.	HCHO	ppm	0.24	0.75	NIOSH-2016

Air Exposure Plates for Microbial Count (Bacteria)

Media used:- Plate Count Agar (Total Bacterial Count)
Exposure time:- 30 mins
Incubation temp/time:- 30^0C/72 hrs
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	42	46	40	38	45
Total count	42	46	40	38	45

Air Exposure Plates Count for Fungi

Media used:- Chloramphenicol Yeast (Glucose) (Yeast & Mould Count)
Exposure time:- 30 mins
Incubation temp/time:- 25^0C/5 days
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	Yeast - 0 Mould – 8	Yeast -0 Mould – 10	Yeast - 0 Mould – 9	Yeast - 0 Mould – 7	Yeast - 0 Mould – 10
Total count	8	10	9	7	10

Report Prepared by: S. Kumar

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/913
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00983
Sample Description : Indoor Air Quality
Date of sampling : 03.01.2021
Sampling Location : Site Office

ANALYSIS RESULT

Sl. No	POLLUTANT	UNIT	RESULT	LIMIT AS PER OSHA	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10μm)	mg/m^3	0.032	15	IS: 5182 (Part-23)
2.	Particulate Matter (<2.5μm)	mg/m^3	0.020	5	TPM/MSK/ENV(AP)/01/03
3.	Temperature	Deg C	27-34	---	IS: 3025 (Part-9)
4.	Humidity	%	69-75	---	By Calculation
5.	VOC	mg/m^3	<0.008	---	NIOSH-1501
6.	Carbon monoxide (CO)	ppm	0.62	50	IS: 5182 (Part-10)
7.	Oxygen (O_2)	%	18.9	---	IS: 13270:1992
8.	Carbon-Dioxide (CO_2)	ppm	550.0	5000	IS: 5182 (Part-10)
9.	HCHO	ppm	0.24	0.75	NIOSH-2016

Air Exposure Plates for Microbial Count (Bacteria)

Media used:- Plate Count Agar (Total Bacterial Count)
Exposure time:- 30 mins
Incubation temp/time:- 30^0C/72 hrs
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	44	40	35	41	34
Total count	44	40	35	41	34

Air Exposure Plates Count for Fungi

Media used:- Chloramphenicol Yeast (Glucose) (Yeast & Mould Count)
Exposure time:- 30 mins
Incubation temp/time:- 25^0C/5 days
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	Yeast - 0 Mould – 7	Yeast -0 Mould – 7	Yeast - 0 Mould – 10	Yeast - 0 Mould – 9	Yeast - 0 Mould – 5
Total count	7	7	10	9	5

Report Prepared by

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING+INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/914
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00988
Sample Description : Indoor Air Quality
Date of sampling : 03.01.2021
Sampling Location : MCC

ANALYSIS RESULT

Sl. No	POLLUTANT	UNIT	RESULT	LIMIT AS PER OSHA	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10μm)	mg/m^3	0.027	15	IS: 5182 (Part-23)
2.	Particulate Matter (<2.5μm)	mg/m^3	0.018	5	TPM/MSK/ENV(AP)/01/03
3.	Temperature	Deg C	27-32	---	IS: 3025 (Part-9)
4.	Humidity	%	72-77	—	By Calculation
5.	VOC	mg/m^3	<0.008	—	NIOSH-1501
6.	Carbon monoxide (CO)	ppm	0.57	50	IS: 5182 (Part-10)
7.	Oxygen (O_2)	%	18.3	---	IS: 13270:1992
8.	Carbon-Dioxide (CO_2)	ppm	524.0	5000	IS: 5182 (Part-10)
9.	HCHO	ppm	0.24	0.75	NIOSH-2016

Air Exposure Plates for Microbial Count (Bacteria)

Media used:- Plate Count Agar (Total Bacterial Count)
Exposure time:- 30 mins
Incubation temp/time:- 30°C/72 hrs
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	43	50	45	43	39
Total count	43	50	45	43	39

Air Exposure Plates Count for Fungi

Media used:- Chloramphenicol Yeast (Glucose) (Yeast & Mould Count)
Exposure time:- 30 mins
Incubation temp/time:- 25°C/5 days
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	Yeast - 0 Mould – 8	Yeast -0 Mould – 10	Yeast - 0 Mould – 10	Yeast - 0 Mould – 8	Yeast - 0 Mould – 11
Total count	8	10	10	8	11

Report Prepared by:

For Mitra S.K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/915
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00978
Sample Description : Indoor Air Quality
Date of sampling : 02.01.2021
Sampling Location : PSS

ANALYSIS RESULT

Sl. No	POLLUTANT	UNIT	RESULT	LIMIT AS PER OSHA	METHOD OF TEST REFERENCE
1.	Particulate Matter (<10μm)	mg/m^3	0.040	15	IS: 5182 (Part-23)
2.	Particulate Matter (<2.5μm)	mg/m^3	0.022	5	TPM/MSK/ENV(AP)/01/03
3.	Temperature	Deg C	25-32	---	IS: 3025 (Part-9)
4.	Humidity	%	68-73	---	By Calculation
5.	VOC	mg/m^3	<0.008	---	NIOSH-1501
6.	Carbon monoxide (CO)	ppm	0.60	50	IS: 5182 (Part-10)
7.	Oxygen (O_2)	%	18.9	---	IS: 13270:1992
8.	Carbon-Dioxide (CO_2)	ppm	535.0	5000	IS: 5182 (Part-10)
9.	HCHO	ppm	0.24	0.75	NIOSH-2016

Air Exposure Plates for Microbial Count (Bacteria)

Media used:- Plate Count Agar (Total Bacterial Count)
Exposure time:- 30 mins
Incubation temp/time:- 30°C/72 hrs
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	40	45	40	46	39
Total count	40	45	40	46	39

Air Exposure Plates Count for Fungi

Media used:- Chloramphenicol Yeast (Glucose) (Yeast & Mould Count)
Exposure time:- 30 mins
Incubation temp/time:- 25°C/5 days
Expressed in Colony Forming Units (CFU)

Location	Corner 1	Corner 2	Corner 3	Corner 4	Middle
Exposure (30 mins)	Yeast - 0 Mould – 7	Yeast -0 Mould – 10	Yeast - 0 Mould – 8	Yeast - 0 Mould – 12	Yeast - 0 Mould – 5
Total count	7	10	8	12	5

Report Prepared by:

For Mitra S.K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/930
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00640
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 02.01.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	8.10
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2057.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.7
4.	Moisture content	%	Lab Method	36.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1261.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	397.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	10.0
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	5.6
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	24.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1334.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	327.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	18.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	26.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	29.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	352.0

Ref. No. BBS/930

Date- 01.02.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	12.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	7359.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	50.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	597.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	474.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	30.0
26.	Silt	%	TPM/MSK/P&E/1/36A	27.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	29.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1581
2.	Total count (Phytobenthos)	50 mg wet sediment	310
3.	No of species (Phytobenthos)	Nos.	2
4.	Diversity index (Phytobenthos)	----	1.88
5.	Major Species (phytobenthos)	----	*Coscinodiscus* sp.,*Biddulphia mobilensis, Navicula closterium*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-41,Bivalvia-28
8.	Total no. of species encountered (Fauna)	Nos.	24
9.	Total fauna (Fauna)	per m^3	207

S. Kaunge
Report Prepared by

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/931
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/00641
Sample Description : Sea Sediment
Sampling Location : Dredging Source Area
Date of sampling : 02.01.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.92
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1879.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.2
4.	Moisture content	%	Lab Method	20.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1421.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977.RA 2015	510.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	12.0
9.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.2
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	31.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1390.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	284.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	20.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	22.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	34.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	374.0

MSK TESTING • INSPECTION

Ref. No. BBS/931

Date- 01.02.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	10.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	6312.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	52.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	720.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	528.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	32.0
26.	Silt	%	TPM/MSK/P&E/1/36A	26.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	22.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1457
2.	Total count (Phytobenthos)	50 mg wet sediment	317
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	----	1.84
5.	Major Species (phytobenthos)	----	*Gyrosigma* sp., *Navicula closterium*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-58,Bivalvia-12
8.	Total no. of species encountered (Fauna)	Nos.	30
9.	Total fauna (Fauna)	per m^3	185

Report Prepared by

For Mitra S.K. Private Limited

Authorized Signatory

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TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/932
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/01129
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 17.01.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.78
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1796.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.2
4.	Moisture content	%	Lab Method	38.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1412.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	509.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	15.0
9.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	5.1
10.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	27.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1388.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	341.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	21.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	28.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	29.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	431.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/932

Date- 01.02.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	14.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	5997.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	25.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	410.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	360.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	32.0
26.	Silt	%	TPM/MSK/P&E/1/36A	27.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	34.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1356
2.	Total count (Phytobenthos)	50 mg wet sediment	287
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	1.71
5.	Major Species (phytobenthos)	----	*Biddulphia mobilensis, Spirulina aeruginea*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-41,Bivalvia-17
8.	Total no. of species encountered (Fauna)	Nos.	22
9.	Total fauna (Fauna)	per m^3	226

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/933
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/01/01130
Sample Description : Sea Sediment
Sampling Location : Dredging Source Site
Date of sampling : 17.01.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	8.06
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1436.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.8
4.	Moisture content	%	Lab Method	36.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1455.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	597.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	17.0
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.4
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	31.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1475.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	316.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	20.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	24.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	32.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	357.0

MSK TESTING • INSPECTION

Ref. No. BBS/933

Date- 01.02.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	16.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	6678.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	48.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	645.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	514.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	34.0
26.	Silt	%	TPM/MSK/P&E/1/36A	27.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	33.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1251
2.	Total count (Phytobenthos)	50 mg wet sediment	309
3.	No of species (Phytobenthos)	Nos.	2
4.	Diversity index (Phytobenthos)	----	1.75
5.	Major Species (phytobenthos)	—	*Gyrosigma* sp., *Nitzschia distans*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-49,Bivalvia-12
8.	Total no. of species encountered (Fauna)	Nos.	25
9.	Total fauna (Fauna)	per m^3	169

Report Prepared by: S. Kanungo

For Mitra S.K. Private Limited

Authorized Signatory

MONTHLY ENVIRONMENT MONITORING REPORT

FEBRUARY- 2021

Directed by

THE DHAMRA PORT COMPANY LIMITED

adani

Ports and Logistics

AT : DOSINGA, PO : DHAMRA
DIST- BHADRAK, PIN : 756171 ODISHA

Conducted by

M/s. Mitra S. K. Private Limited

MSK
TESTING • INSPECTION

Shrachi Centre (5th Floor)
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MSK TESTING • INSPECTION

Report No: BBS/310A **Date: 01.03.2021**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002129**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Colony Area**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
01.02.2021	50.00	28.60	6.60	19.40	0.57	16.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.02.2021	52.60	26.10	7.20	25.80	0.68	23.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.02.2021	51.10	29.60	6.40	18.40	0.48	14.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.02.2021	49.60	25.20	6.90	22.50	0.47	19.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.02.2021	47.20	24.30	7.40	27.60	0.71	24.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.02.2021	49.60	26.80	6.70	21.20	0.54	18.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.02.2021	50.00	26.00	6.20	16.50	0.42	13.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.02.2021	46.90	24.00	6.10	20.70	0.62	15.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**49.63**	**26.33**	**6.69**	**21.51**	**0.56**	**18.20**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff. 2012**	**IS 5182 : Part 6 :2006 (Reaff. 2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182(Part-11):2006 Reaff.2012**	**IS:5182(Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By –

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Checked By-

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MSK TESTING • INSPECTION

Report No: BBS/310B **Date: 01.03.2021**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002129**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Kanak Prasad Village**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.02.2021	50.20	27.30	6.90	25.40	0.59	21.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.02.2021	53.60	28.40	6.40	22.10	0.51	19.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.02.2021	55.00	25.40	7.00	26.30	0.66	24.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.02.2021	54.10	26.90	6.70	21.60	0.49	18.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.02.2021	56.20	27.10	6.80	23.50	0.58	20.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.02.2021	50.80	27.60	6.50	19.50	0.41	16.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.02.2021	52.30	27.10	6.60	24.40	0.74	22.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.02.2021	54.00	26.00	6.10	18.20	0.40	14.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**53.28**	**26.98**	**6.63**	**22.63**	**0.55**	**19.83**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff. 2012**	**IS 5182 : Part 6 :2006 (Reaff. 2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182(Part-11):2006 Reaff,2012**	**IS:5182(Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By –

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MSK TESTING • INSPECTION

Report No: BBS/310C **Date: 01.03.2021**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002129**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near BMH**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.02.2021	63.20	28.10	7.20	25.30	0.68	23.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.02.2021	57.50	30.00	6.70	22.50	0.51	19.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.02.2021	56.90	28.60	6.80	24.40	0.62	20.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.02.2021	62.20	27.30	7.50	27.20	0.69	24.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.02.2021	59.50	28.00	6.30	21.30	0.55	18.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.02.2021	61.20	29.50	6.90	26.10	0.70	25.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.02.2021	59.50	27.40	6.80	25.40	0.71	22.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.02.2021	63.40	26.00	6.40	18.70	0.40	15.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**60.43**	**28.11**	**6.83**	**23.86**	**0.61**	**21.25**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff.2012**	**IS:5182 (Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By –

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MSK TESTING • INSPECTION

Report No: BBS/310D **Date: 01.03.2021**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002129**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near Jetty**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.02.2021	83.00	39.40	6.80	23.10	0.65	19.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.02.2021	79.80	37.00	7.10	25.40	0.71	22.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.02.2021	77.00	38.00	7.20	27.60	0.69	25.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.02.2021	73.80	39.40	6.40	21.20	0.55	18.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.02.2021	71.00	35.00	6.90	26.50	0.64	21.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.02.2021	70.00	34.90	7.50	28.40	0.79	26.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.02.2021	72.00	36.40	6.70	24.20	0.61	20.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.02.2021	68.00	34.20	6.30	20.10	0.47	17.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**74.33**	**36.79**	**6.86**	**24.56**	**0.64**	**21.41**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By –

MITRA S.K. PRIVATE LIMITED BBSR

Checked By-

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MSK TESTING • INSPECTION

Report No: BBS/310E **Date: 01.03.2021**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002129**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Dosinga Village**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.02.2021	51.20	29.20	6.10	18.40	0.48	16.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.02.2021	55.20	31.20	6.50	22.10	0.57	19.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.02.2021	49.60	28.60	7.10	25.60	0.69	22.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.02.2021	51.50	30.10	6.30	19.70	0.44	15.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.02.2021	50.80	31.20	6.90	24.80	0.67	21.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.02.2021	53.20	27.60	6.40	20.00	0.59	17.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.02.2021	51.60	28.00	6.60	23.20	0.62	18.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.02.2021	50.20	26.50	6.20	17.40	0.41	14.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**51.66**	**29.05**	**6.51**	**21.40**	**0.56**	**18.15**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By –

MITRA S.K. PRIVATE LIMITED BBSR

Checked By-

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

Report No: BBS/310F **Date: 01.03.2021**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002129**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near Bhitarkanika**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
01.02.2021	47.60	29.70	6.90	24.20	0.68	22.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.02.2021	49.30	28.00	6.40	20.50	0.44	17.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.02.2021	53.60	27.40	6.70	22.60	0.59	19.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.02.2021	51.30	25.00	6.80	23.50	0.61	20.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.02.2021	49.80	24.90	6.60	21.60	0.43	18.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.02.2021	50.30	23.00	6.10	17.80	0.40	13.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.02.2021	52.10	24.50	6.50	18.20	0.58	16.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.02.2021	52.00	27.10	6.40	19.20	0.52	15.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**50.75**	**26.20**	**6.55**	**20.95**	**0.53**	**17.86**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff,2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By –

MITRA S.K. PRIVATE LIMITED BBSR

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/312
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/02/01132
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day L Time dB(A)				Night Time L dB(A)			
			MAX	MIN	AVG.	Limit	MAX	MIN	AVG.	Limit
[illegible]	04.02.2021	Colony Area (R)	48.2	42.1	46.8	55	40.5	32.7	36.0	45
[illegible]	04.02.2021	Kanak Prasad Village (R)	49.2	40.0	44.1	55	39.2	34.7	37.1	45
[illegible]	07.02.2021	Near BMH (I)	65.0	57.1	60.0	75	58.1	47.6	50.0	70
[illegible]	08.02.2021	Near Jetty (I)	68.0	60.1	63.4	75	61.1	56.0	60.0	70
[illegible]	14.02.2021	Dosinga Village (R)	51.2	44.0	49.6	55	39.3	32.1	36.4	45
[illegible]	15.02.2021	Near Bhitarkanika (Eco Sensitive Zone)	44.0	37.3	40.0	50	36.0	31.4	34.0	40

Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited
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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/311
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/02/01257
Sample Description : VOC Monitoring

ANALYSIS

Sl. No	Date of Monitoring	Sampling Location	Method of Analysis	Parameter	Result
1.	01.02.2021	Jetty	NIOSH-1501	Volatile Organic Compound (VOC in mg/m^3)	<0.008
2.	02.02.2021	Wagon Tippler			<0.008
3.	03.02.2021	Near Silo			<0.008
4.	04.02.2021	Transfer Point			<0.008
5.	06.02.2021	BMH Workshop			<0.008
6.	07.02.2021	Steel Yard			<0.008
7.	08.02.2021	FCC Shed			<0.008
8.	09.02.2021	SS 6 Office			<0.008

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/313
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/02/01134
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg Leq dB(A)
1.	01.02.2021	Stack Yard	87.9	52.5	64.1
2.	06.02.2021	Wagon Tippler	83.1	50.1	65.0
3.	11.02.2021	Near Silo	86.5	62.2	80.3
4.	13.02.2021	Near Stacker & Reclaimer	86.4	51.1	66.8
5.	18.02.2021	Project Area	80.3	47.8	65.7
6.	20.02.2021	Transfer Point	87.0	53.9	63.8
7.	21.02.2021	Workshop	84.6	59.4	72.4
8.	22.02.2021	Steel Yard	86.3	47.7	65.0
9.	23.02.2021	FCC Shed	81.6	41.2	66.0
10.	24.02.2021	Road (MCC 1 – PSS)	84.0	43.7	60.6

OSHA'S Permissible Noise Exposure Limits	
Noise Level	**Exposure Limit**
90 dBA	**8.0 hours**

Report Prepared by:

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For Mitra S.K. Private Limited

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MSK TESTING • INSPECTION

Ref : **MSKGL/FD/2020-21/001434**

Date : **01.03.2021**

GROUND WATER LEVEL MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/FD/2020-21/001434**
Type of Sample	**Piezometric Well**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	15.02.2021	14.20
2	Near WTP	15.02.2021	12.72

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, 756171 ODISHA

Report No. : BBS/314
Date : 01.03.2021
Sample No. : MSKGL/FD/2020-21/02/00364
Date of sampling : 15.02.2021
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	---	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.20
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	6.56
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	65.92
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	112.17
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	460.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	165.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	24.72
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	188.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	190.0

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MSK TESTING • INSPECTION

Ref. No. BBS/314 **Date- 01.03.2021**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

MITRA S.K. PRIVATE LIMITED

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/315
Date : 01.03.2021
Sample No. : MSKGL/FD/2020-21/02/00365
Date of sampling : 15.02.2021
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.24
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	5.82
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	55.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	122.36
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	440.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	180.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	22.64
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	160.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	210.0

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32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

Mitra S. K. Private Limited

N-5/100, Ground Floor
IRC Village, Nayapalli
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[CIN : U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/316
Date : 01.03.2021
Sample No. : MSKGL/FD/2020-21/02/00366
Date of sampling : 15.02.2021
Sampling Description : Ground Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.30
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	7.54
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	46.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	81.57
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	410.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	175.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.78
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	180.40
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	220.0

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32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/317
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/02/00973
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 03.02.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.32
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2105.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.62
4.	Moisture content	%	Lab Method	26.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1587.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	478.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	18.0
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	7.3
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	30.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1421.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	389.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	20.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	18.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	35.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	419.0

MSK TESTING • INSPECTION

Ref. No. BBS/317

Date- 01.03.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	10.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	4211.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	21.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	398.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	381.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	34.0
26.	Silt	%	TPM/MSK/P&E/1/36A	30.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	36.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	2500
2.	Total count (Phytobenthos)	50 mg wet sediment	351
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	----	1.64
5.	Major Species (phytobenthos)	----	*Coscinodiscus,Nitzschia,Pleurosigma*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-19,Bivalvia-17
8.	Total no. of species encountered (Fauna)	Nos.	36
9.	Total fauna (Fauna)	per m^3	381

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/318
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/01/00974
Sample Description : Sea Sediment
Sampling Location : Dredging Source Area
Date of sampling : 03.02.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.47
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1800.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.57
4.	Moisture content	%	Lab Method	24.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1524.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	650.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	20.0
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	5.2
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	27.6
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1358.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	368.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	23.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	30.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	44.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	305.0

MSK TESTING • INSPECTION

Ref. No. BBS/318

Date- 01.03.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	13.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	32.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	5267.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	59.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	420.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	392.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	31.0
26.	Silt	%	TPM/MSK/P&E/1/36A	29.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	40.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	2100
2.	Total count (Phytobenthos)	50 mg wet sediment	309
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	----	1.32
5.	Major Species (phytobenthos)	----	*Coscinodiscus,Bidulphia,Pleurosigma*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-29,Bivalvia-17
8.	Total no. of species encountered (Fauna)	Nos.	46
9.	Total fauna (Fauna)	per m^3	429

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited
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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/319
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/02/01125
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 22.02.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	8.29
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2012.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.65
4.	Moisture content	%	Lab Method	36.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1721.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	419.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	11.0
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	7.2
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	31.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1258.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	221.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	16.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	18.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	29.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	358.0

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Ref. No.BBS/319Date- 01.03.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	8.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	4891.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	31.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	600.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	571.0
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	36.0
26.	Silt	%	TPM/MSK/P&E/1/36A	31.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	33.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	2600
2.	Total count (Phytobenthos)	50 mg wet sediment	358
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	1.97
5.	Major Species (phytobenthos)	----	*Biddulphia, Coscinodiscus,Pleurosigma, Navicula*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class& Number of individuals encountered (Fauna)	----	Plychaeta-20,Bivalvia-22
8.	Total no. of species encountered (Fauna)	Nos.	44
9.	Total fauna (Fauna)	per m^3	434

Report Prepared by:

MITRA S.K. PRIVATE LIMITED BBSR

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited
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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/320
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/01/01126
Sample Description : Sea Sediment
Sampling Location : Dredging Source Site
Date of sampling : 22.02.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	8.11
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1721.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.51
4.	Moisture content	%	Lab Method	29.0
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1511.0
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	524.0
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	10.0
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	6.0
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	23.0
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1358.0
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	228.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	9.0
14.	Nickel (as Ni)	mg/kg	EPA 6010D	11.0
15.	Zinc (as Zn)	mg/kg	EPA 6010D	18.0
16.	Manganese (as Mn)	mg/kg	EPA 6010D	213.0

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Ref. No. BBS/320

Date- 01.03.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	5.0
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
19.	Aluminium (as Al)	mg/kg	EPA 6010D	5041.0
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	19.0
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	476.0
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	0.51
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
25.	Sand	%	TPM/MSK/P&E/1/36A	43.0
26.	Silt	%	TPM/MSK/P&E/1/36A	31.0
27.	Texture	None	TPM/MSK/P&E/1/36A	Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	26.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	2700
2.	Total count (Phytobenthos)	50 mg wet sediment	283
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	----	1.8
5.	Major Species (phytobenthos)	----	*Nitzschia, Coscinodiscus,Bidulphia,Pleurosigma*
6.	Name of Phylum (Fauna)	----	Annelida
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-29
8.	Total no. of species encountered (Fauna)	Nos.	29
9.	Total fauna (Fauna)	per m^3	384

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/321
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/02/00948
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 04.02.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.3	7.5
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	97.0	12.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	53.0	7.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	270.0	23.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	2.0	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	38.0	2.5
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	44.0	9.0
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1200.0	95.0

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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Bhubaneswar - 751015
[CIN : U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/323
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/02/01095
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 18.02.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.0	7.3
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	114.0	9.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	75.0	4.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	310.0	18.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	2.2	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	33.0	2.2
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	45.0	6.4
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	7000.0	80.0

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/322
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/02/00950
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 04.02.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 9.0	APHA (23rd Edition) 4500 H-B	6.9	7.2
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	210.0	6.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	90.0	9.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	410.0	24.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	3.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	29.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	46.0	4.3
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1700.0	90.0

Report Prepared by:

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For Mitra S. K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/324
Date : 01.03.2021
Sample No. : MSKGL/ED/2020-21/02/01097
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 18.02.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 9.0	APHA (23rd Edition) 4500 H-B	6.6	7.8
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	153.0	7.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	60.0	6.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	290.0	29.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	4.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	27.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	40.0	3.2
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1100.0	80.0

Report Prepared by:

For Mitra S. K. Private Limited

MITRA S.K. PRIVATE LIMITED BBSR

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MSK TESTING + INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/325
Date : 01.02.2021
Sample No. : MSKGL/ED/2020-21/02/01098
Sample Description : EFFLUENT WATER
Sampling Location : STP 150 KLD
Date of sampling : 18.02.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.0	7.5
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	20.0	APHA (23rd Edition) 2540D	70.0	10.0
6.	BOD	mg/l	10.0	APHA (23rd Edition) 5210B 2017	25.0	8.0
7.	COD	mg/l	50.0	APHA (23rd Edition) 5220B 2017	109.0	41.0
8.	Oil & Grease	mg/l	10.0	APHA (23rd Edition) 5220B 2017	2.4	<1.4
9.	Ammonical Nitrogen	mg/l	5.0	APHA (23rd Edition) 4500-NH3-F 2017	11.0	<0.1
10.	Total Nitrogen (as N)	mg/l	10.0	IS 14684 (1999); Rffm:2014	17.0	3.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1100.0	270.0

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S. K. Private Limited

Authorized Signatory

MONTHLY ENVIRONMENT MONITORING REPORT

MARCH- 2021

Directed by

THE DHAMRA PORT COMPANY LIMITED

adani

Ports and Logistics

AT : DOSINGA, PO : DHAMRA
DIST- BHADRAK, PIN : 756171 ODISHA

Conducted by

M/s. Mitra S. K. Private Limited

MSK TESTING • INSPECTION

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MSK TESTING • INSPECTION

Report No: BBS/020A

Date: 01.04.2021

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002884**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Colony Area**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
03.03.2021	48.20	26.90	6.22	20.40	0.49	17.61	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.03.2021	47.00	25.80	6.48	22.88	0.58	18.55	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.03.2021	49.30	27.00	7.20	27.51	0.75	24.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.03.2021	48.00	23.60	6.65	24.18	0.64	20.59	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.03.2021	46.50	24.20	6.90	25.20	0.79	21.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.03.2021	47.60	26.00	6.17	18.75	0.44	15.88	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.03.2021	46.80	25.20	6.74	23.80	0.66	19.56	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.03.2021	45.00	23.80	6.57	17.63	0.40	14.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**47.30**	**25.31**	**6.62**	**22.54**	**0.59**	**19.09**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff, 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff. 2012**	**IS 5182 : Part 6 :2006 (Reaff. 2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182(Part-11):2006 Reaff,2012**	**IS:5182(Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By –

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MSK TESTING #INSPECTION

Report No: BBS/020B

Date: 01.04.2021

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002884**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Kanak Prasad Village**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
03.03.2021	53.10	29.20	6.17	18.79	0.42	15.22	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.03.2021	51.50	25.30	6.24	20.79	0.51	17.36	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.03.2021	52.00	24.80	6.91	25.70	0.74	23.59	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.03.2021	48.30	27.00	6.58	23.29	0.61	19.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.03.2021	47.60	26.10	6.33	24.72	0.69	20.41	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.03.2021	48.00	24.00	6.40	19.75	0.52	16.66	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.03.2021	47.20	23.10	7.02	26.33	0.81	24.63	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.03.2021	46.80	24.80	6.90	28.81	0.86	26.77	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**49.31**	**25.54**	**6.57**	**23.52**	**0.65**	**20.57**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff. 2012**	**IS 5182 : Part 6 :2006 (Reaff. 2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA – IO3.4June,1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182(Part-11):2006 Reaff,2012**	**IS:5182(Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gazt. Notification

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MSK TESTING • INSPECTION

Report No: BBS/020C

Date: 01.04.2021

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002884**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near BMH**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
03.03.2021	62.10	29.60	7.14	27.71	0.78	25.44	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.03.2021	60.00	28.50	6.24	18.54	0.43	14.31	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.03.2021	58.60	30.00	6.30	20.80	0.54	16.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.03.2021	59.80	26.80	7.40	28.36	0.85	26.22	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.03.2021	58.00	25.00	6.62	23.13	0.65	20.28	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.03.2021	56.20	26.70	6.51	22.45	0.59	19.27	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.03.2021	55.00	25.90	6.74	25.12	0.71	21.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.03.2021	54.20	24.30	6.85	26.44	0.62	18.52	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**57.99**	**27.10**	**6.73**	**24.07**	**0.65**	**20.29**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaffirmed 2012)**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff.2012)**	**IS 5182 : Part 6 :2006 (Reaff.2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4 June,1999**	**EPA - IO3.4 June,1999**	**IS:5182 (Part-11):2006 Reaff.2012**	**IS:5182 (Part-12):2004 Reaff.: 2014**

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MSK TESTING INSPECTION

Report No: BBS/020D

Date: 01.04.2021

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002884**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near Jetty**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
03.03.2021	69.00	37.00	6.92	24.84	0.74	21.78	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.03.2021	66.00	35.80	7.32	26.44	0.69	23.65	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.03.2021	68.20	36.20	7.56	28.69	0.82	26.11	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.03.2021	65.00	35.20	7.19	25.47	0.61	20.25	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.03.2021	66.70	36.70	7.78	30.12	0.87	27.39	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.03.2021	64.20	33.00	6.84	21.32	0.59	18.55	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.03.2021	62.70	32.50	6.61	19.49	0.48	16.73	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.03.2021	64.00	31.00	7.88	31.23	0.86	28.77	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**65.73**	**34.68**	**7.26**	**25.95**	**0.71**	**22.90**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaf E 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 Reaff.2012**	**IS:5182 (Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

Prepared By –

MITRA S.K. PRIVATE LIMITED

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MSK TESTING • INSPECTION

Report No: BBS/020E

Date: 01.04.2021

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002884**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Dosinga Village**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
03.03.2021	49.30	30.00	6.24	19.63	0.40	15.98	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.03.2021	48.00	29.10	6.33	21.49	0.49	18.64	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.03.2021	47.20	28.60	6.90	28.53	0.76	25.39	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.03.2021	50.00	27.50	7.24	29.31	0.81	27.31	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.03.2021	51.20	26.90	7.08	26.45	0.70	23.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.03.2021	46.50	28.30	6.11	18.78	0.45	14.21	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.03.2021	45.00	25.60	6.31	20.70	0.57	17.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.03.2021	44.10	24.60	6.81	27.10	0.73	24.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**47.66**	**27.58**	**6.63**	**24.00**	**0.61**	**20.92**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4 June,1999**	**EPA - IO3.4 June,1999**	**IS:5182 (Part-11):2006 Reaff.2012**	**IS:5182 (Part-12):2004 Reaff.: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gatt. Notification

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MSK TESTING • INSPECTION

Report No: BBS/020F

Date: 01.04.2021

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002884**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near Bhitarkanika**
Sampling Done by	**Mr. Kunja Bihari Nayak**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
03.03.2021	50.00	28.00	6.12	17.63	0.42	13.64	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.03.2021	48.10	27.30	6.22	19.09	0.48	15.77	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.03.2021	46.50	26.00	6.40	21.17	0.57	17.32	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.03.2021	47.80	26.00	6.93	28.76	0.74	26.19	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.03.2021	46.20	25.10	6.52	25.42	0.66	22.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.03.2021	45.00	24.00	6.71	26.44	0.71	23.42	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.03.2021	46.90	23.10	6.38	23.70	0.50	19.48	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.03.2021	45.30	23.80	6.62	24.31	0.69	18.33	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**46.98**	**25.41**	**6.49**	**25.32**	**0.60**	**19.58**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi AAQ Standard	**100**	**60**	**80**	**80**	**4**	**400**	**180**	**1**	**20**	**6**	**5**	**1**
Time Weighted Average (hrs.)	**24**	**24**	**24**	**24**	**1**	**24**	**1**	**24**	**Annual**	**Annual**	**Annual**	**Annual**
TEST METHOD	**IS 5182: Part 23:2006 (Reaff. 2012**	**IS 5182: Part 24:2019**	**IS 5182 : Part 2 :2001 (Reaff .2012**	**IS 5182 : Part 6 :2006 (Reaff .2012)**	**IS 5182 : Part 10 :1999 (Reaff.2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4 June, 1999**	**EPA - IO3.4June,1999**	**EPA - IO3.4June,1999**	**IS:5182 (Part-11):2006 ReaffE2012**	**IS:5182 (Part-12):2004 Reaff,: 2014**

N.B- *NAAQ- National Ambient Air Quality Standard as per 18th Nov. 2009 Gazt. Notification

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/021
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/00983
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 03.03.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.61	7.48
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20	APHA (23rd Edition) 2540D	108.00	3.40
6.	BOD	mg/l	<10	APHA (23rd Edition) 5210B 2017	34.00	7.20
7.	COD	mg/l	<50	APHA (23rd Edition) 5220B 2017	104.00	28.00
8.	Oil & Grease	mg/l	<10	APHA (23rd Edition) 5220B 2017	<1.40	<1.40
9.	Ammonical Nitrogen	mg/l	<5	APHA (23rd Edition) 4500-NH3-F 2017	42.00	2.10
10.	Total Nitrogen (as N)	mg/l	<10	IS 14684 (1999); Rffm:2014	51.00	3.40
11.	Faecal Coliform	MPN/ 100ml	<1000	APHA (23rd Edition) 9221 E	1700.00	75.00

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
6DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/022
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/00985
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 03.03.2021

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.96	7.29
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20	APHA (23rd Edition) 2540D	148.00	6.10
6.	BOD	mg/l	<10	APHA (23rd Edition) 5210B 2017	45.00	4.00
7.	COD	mg/l	<50	APHA (23rd Edition) 5220B 2017	132.00	20.00
8.	Oil & Grease	mg/l	<10	APHA (23rd Edition) 5220B 2017	6.10	<1.40
9.	Ammonical Nitrogen	mg/l	<5	APHA (23rd Edition) 4500-NH3-F 2017	31.00	<0.10
10.	Total Nitrogen (as N)	mg/l	<10	IS 14684 (1999); Rffm:2014	39.00	2.80
11.	Faecal Coliform	MPN/ 100ml	<1000	APHA (23rd Edition) 9221 E	2100.00	85.00

Report Prepared by:

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
6DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/023
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/00987
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 03.03.2021

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.06	7.21
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20	APHA (23rd Edition) 2540D	129.00	5.50
6.	BOD	mg/l	<10	APHA (23rd Edition) 5210B 2017	94.00	4.00
7.	COD	mg/l	<50	APHA (23rd Edition) 5220B 2017	264.00	20.00
8.	Oil & Grease	mg/l	<10	APHA (23rd Edition) 5220B 2017	6.00	<1.40
9.	Ammonical Nitrogen	mg/l	<5	APHA (23rd Edition) 4500-NH3-F 2017	50.00	0.21
10.	Total Nitrogen (as N)	mg/l	<10	IS 14684 (1999); Rffm:2014	58.00	1.20
11.	Faecal Coliform	MPN/ 100ml	<1000	APHA (23rd Edition) 9221 E	1200.00	90.00

For Mitra S. K. Private Limited

Report Prepared by:

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/024
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01426
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 17.03.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.13	7.57
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20	APHA (23rd Edition) 2540D	131.00	<2.50
6.	BOD	mg/l	<10	APHA (23rd Edition) 5210B 2017	40.00	4.70
7.	COD	mg/l	<50	APHA (23rd Edition) 5220B 2017	154.00	17.00
8.	Oil & Grease	mg/l	<10	APHA (23rd Edition) 5220B 2017	5.00	<1.40
9.	Ammonical Nitrogen	mg/l	<5	APHA (23rd Edition) 4500-NH3-F 2017	30.00	1.30
10.	Total Nitrogen (as N)	mg/l	<10	IS 14684 (1999); Rffm:2014	39.00	1.80
11.	Faecal Coliform	MPN/ 100ml	<1000	APHA (23rd Edition) 9221 E	2100.00	80.00

Report Prepared by:

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For Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/025
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01428
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 17.03.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.02	7.72
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20	APHA (23rd Edition) 2540D	126.00	8.00
6.	BOD	mg/l	<10	APHA (23rd Edition) 5210B 2017	70.00	6.00
7.	COD	mg/l	<50	APHA (23rd Edition) 5220B 2017	196.00	32.00
8.	Oil & Grease	mg/l	<10	APHA (23rd Edition) 5220B 2017	9.00	<1.40
9.	Ammonical Nitrogen	mg/l	<5	APHA (23rd Edition) 4500-NH3-F 2017	37.00	<0.10
10.	Total Nitrogen (as N)	mg/l	<10	IS 14684 (1999); Rffm:2014	51.00	3.50
11.	Faecal Coliform	MPN/ 100ml	<1000	APHA (23rd Edition) 9221 E	1800.00	95.00

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S. K. Private Limited

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MSK TESTING INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/026
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01430
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 17.03.2021

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Clear
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	7.29	7.46
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20	APHA (23rd Edition) 2540D	140.00	7.00
6.	BOD	mg/l	<10	APHA (23rd Edition) 5210B 2017	125.00	5.40
7.	COD	mg/l	<50	APHA (23rd Edition) 5220B 2017	328.00	26.00
8.	Oil & Grease	mg/l	<10	APHA (23rd Edition) 5220B 2017	18.00	<1.40
9.	Ammonical Nitrogen	mg/l	<5	APHA (23rd Edition) 4500-NH3-F 2017	62.00	0.40
10.	Total Nitrogen (as N)	mg/l	<10	IS 14684 (1999); Rffm:2014	73.00	1.80
11.	Faecal Coliform	MPN/ 100ml	<1000	APHA (23rd Edition) 9221 E	1600.00	100.00

Report Prepared by:

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For Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/027
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01945
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day L Time dB(A)				Night Time L dB(A)			
			MAX	MIN	AVG.	Limit	MAX	MIN	AVG.	Limit
1.	01.03.2021	Colony Area (R)	50.00	44.60	47.00	55	41.10	33.20	37.40	45
2.	06.03.2021	Kanak Prasad Village (R)	50.20	41.80	47.60	55	40.00	35.00	37.90	45
3.	08.03.2021	Near BMH (I)	68.00	59.40	61.20	75	62.50	48.20	57.30	70
4.	13.03.2021	Near Jetty (I)	70.00	63.40	65.00	75	64.00	58.10	62.00	70
5.	15.03.2021	Dosinga Village (R)	50.40	44.30	46.50	55	40.70	35.60	37.20	45
6.	20.03.2021	Near Bhitarkanika (Eco Sensitive Zone)	45.10	38.60	41.80	50	36.80	30.70	34.10	40

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S. K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

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THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/028
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01722
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg Leq dB(A)
1.	02.03.2021	Stack Yard	86.00	35.70	64.60
2.	03.03.2021	Wagon Tippler	85.40	53.20	75.80
3.	04.03.2021	Near Silo	87.30	47.30	75.00
4.	07.03.2021	Near Stacker & Reclaimer	80.10	60.40	68.20
5.	09.03.2021	Project Area	84.00	49.40	60.70
6.	10.03.2021	Transfer Point	85.90	59.30	80.70
7.	11.03.2021	Workshop	81.80	53.80	70.20
8.	14.03.2021	Steel Yard	83.20	37.60	69.90
9.	16.03.2021	FCC Shed	80.70	41.40	63.90
10.	17.03.2021	Near Port Canteen	85.30	52.80	69.20

OSHA'S Permissible Noise Exposure Limits	
Noise Level	**Exposure Limit**
90 dBA	**8.0 hours**

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

Mitra S. K. Private Limited

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U51909WB1956PTC023037]

T : (0674) 2362916, 2360917
F : (0674) 2362918

MSK TESTING • INSPECTION

Ref : **MSKGL/FD/2020-21/001633**

Date : **01.04.2021**

GROUND WATER LEVEL MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/FD/2020-21/001076**
Type of Sample	**Piezometric Well**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	16.03.2021	16.60
2	Near WTP	16.03.2021	15.32

For Mitra S. K. Private Limited.

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

Authorized Signatory

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MSK TESTING INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, 756171 ODISHA

Report No. : BBS/029
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00445
Date of sampling : 16.03.2021
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	—	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.15
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	7.60
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	40.40
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	89.07
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	420.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	172.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	14.54
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	161.60
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	206.00

MSK TESTING • INSPECTION

Ref. No. BBS/029

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/030
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00446
Date of sampling : 16.03.2021
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.19
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	8.68
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	56.56
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	98.97
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	460.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	190.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	24.24
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	168.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	—	—	IS 3025 (Part 14)- 2013	219.00

MSK TESTING • INSPECTION

Ref. No. BBS/030

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

Mitra S. K. Private Limited

N-5/100, Ground Floor
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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/031
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00447
Date of sampling : 16.03.2021
Sampling Description : Ground Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	—	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.21
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	7.42
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	48.48
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	—	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	79.18
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	396.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	165.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.39
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	174.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	—	—	IS 3025 (Part 14)- 2013	208.00

MSK TESTING • INSPECTION

Ref. No. BRS/031

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rflm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rflm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rflm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rflm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

MITRA S.K. PRIVATE LIMITED

Authorized Signatory

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MSK TESTING INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/032
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01744
Sample Description : VOC Monitoring

ANALYSIS

Sl. No	Date of Monitoring	Sampling Location	Method of Analysis	Parameter	Result
1.	01.03.2021	Jetty	NIOSH-1501	Volatile Organic Compound (VOC in mg/m^3)	<0.008
2.	02.03.2021	Wagon Tippler			<0.008
3.	03.03.2021	Near Silo			<0.008
4.	03.03.2021	Transfer Point			<0.008
5.	04.03.2021	BMH Workshop			<0.008
6.	04.03.2021	Steel Yard			<0.008
7.	11.03.2021	FCC Shed			<0.008
8.	11.03.2021	SS 6 Office			<0.008

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S. K. Private Limited

Authorized Signatory

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[CIN: U51909WB1956PTC023037]

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MSK TESTING INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/033
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00325
Date of sampling : 08.03.2021
Sampling Description : Drinking Water
Sampling Location : Township E Block Area
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.28
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	6.76
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	56.56
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	59.38
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	426.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	172.50
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.39
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	179.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	2.06
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	48.00

MSK TESTING • INSPECTION

Ref. No. BBS/033

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/034
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00326
Date of sampling : 08.03.2021
Sampling Description : Drinking Water
Sampling Location : Prefab Area
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.56
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	7.26
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	50.56
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	—	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	69.28
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984, Rffm:2012	470.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	180.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	24.24
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	183.40
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	1.48
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.0001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	—	—	IS 3025 (Part 14)- 2013	36.00

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/034

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/035
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00327
Date of sampling : 08.03.2021
Sampling Description : Drinking Water
Sampling Location : Jetty Area
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.49
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	5.62
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	56.56
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	79.18
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	438.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	180.40
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.39
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	168.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	44.00

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Ref. No. BBS/035

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSHINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/036
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00328
Date of sampling : 08.03.2021
Sampling Description : Drinking Water
Sampling Location : Port Canteen
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.64
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	6.80
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	51.00
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	79.18
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	456.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	170.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	24.24
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	176.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	41.00

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MSK TESTING • INSPECTION

Ref. No. BBS/036

Date- 01.04.2021

32	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

MITRA S.K. PRIVATE LIMITED

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/037
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00329
Date of sampling : 07.03.2021
Sampling Description : Drinking Water
Sampling Location : DAV Public School (Kuamara)
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.74
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	4.68
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	40.40
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	79.18
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	386.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	175.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.39
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	140.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	—	—	IS 3025 (Part 14)- 2013	36.00

MSK TESTING • INSPECTION

Ref. No. BBS/037

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rflm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rflm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rflm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rflm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

MITRA S.K. PRIVATE LIMITED

Authorized Signatory

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MSK TESTING & INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/038
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00330
Date of sampling : 08.03.2021
Sampling Description : Drinking Water
Sampling Location : Birupa Colony
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	—	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.43
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	5.20
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	40.40
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Flouride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983, Rffm:2012	BDL(DL:1.0)
13.	Odour	—	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	69.28
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	440.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	175.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	24.24
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	179.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	—	—	IS 3025 (Part 14)- 2013	38.00

MSK
TESTING • INSPECTION

Ref. No. BBS/038

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

MITRA S.K. PRIVATE LIMITED

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/039
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00331
Date of sampling : 08.03.2021
Sampling Description : Drinking Water
Sampling Location : Health Centre
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.35
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	6.10
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	48.48
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	79.18
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	444.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	165.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	24.24
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	151.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	—	—	IS 3025 (Part 14)- 2013	39.00

Continuation Sheet

MSK TESTING ★ INSPECTION

Ref. No. BBS/039

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/040
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00332
Date of sampling : 07.03.2021
Sampling Description : Drinking Water
Sampling Location : Security Barrack (North Gate)
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.52
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	5.26
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	44.00
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	79.18
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	412.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	170.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	14.54
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	181.80
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	---	----	IS 3025 (Part 14)- 2013	39.00

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/040

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/041
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00333
Date of sampling : 08.03.2021
Sampling Description : Drinking Water
Sampling Location : SS-6 Office
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.56
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	4.86
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	48.48
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	59.68
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	416.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	180.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.39
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	163.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	42.00

MSK TESTING ★ INSPECTION

Ref. No. BBS/041

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/042
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00334
Date of sampling : 07.03.2021
Sampling Description : Ground Water
Sampling Location : Kanak Prasad
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.55
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	5.62
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	48.48
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	69.28
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	448.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	190.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	24.24
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	170.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	70.00

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/042

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/043
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00335
Date of sampling : 07.03.2021
Sampling Description : Ground Water
Sampling Location : Balisahi
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.52
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	4.80
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	50.00
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	69.28
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	440.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	170.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	24.24
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	168.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	—	—	IS 3025 (Part 14)- 2013	64.00

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/043

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

Report Prepared by:

For Mitra S. K. Private Limited.

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MITRA S.K. PRIVATE LIMITED

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/044
Date : 01.04.2021
Sample No. : MSKGL/FD/2020-21/03/00336
Date of sampling : 07.03.2021
Sampling Description : Ground Water
Sampling Location : Dosinga
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

SL No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coli	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected
2.	Total Coliform Organism	/100ml	Not Detectable	IS: 15185 : 2016	Not Detected

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

SL No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26^0 C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.48
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	4.96
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rffm: 2014	44.00
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	59.38
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm:2012	430.00
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rffm: 2009	165.00
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rffm: 2014	19.39
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	188.00
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	73.00

Continuation Sheet

MSK TESTING * INSPECTION

Ref. No. BBS/044

Date- 01.04.2021

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edtn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/045
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/00981
Sample Description : Surface Water
Sampling Location : Matai River Near DPCL Intake Point
Date of Sampling : 07.03.2021

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standards as per IS 2296	Test Method / Specification	Result
1.	Colour	Hazen	300	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	6.5 - 8.5	APHA 23rd Edition, 4500-H-B	7.80
4.	Copper as Cu	mg/l	1.5	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	1.5	APHA (23rd Edition)4500 - F C/D, 2017	0.31
6.	Iron as Fe	mg/l	50.0	APHA 23rd Edition,3500 Fe B 2017	2.10
7.	Manganese as Mn	mg/l	----	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound as C_6H_5OH	mg/l	0.005	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	0.05	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	0.01	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.05	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	----	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	----	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	----	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	15.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.05	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	----	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	----	APHA 23rd Edition, 2540D	92.00
21.	Temperature	Deg C	----	APHA 23rd Edtn,2550 B	27.00
22.	BOD (3days at 25°C)	mg/l	3.0	APHA (23rd Edition)5210B 2017	1.60
23.	COD	mg/l	----	APHA 23rd Edition, 5220B 2017	14.00
24.	Oil & Grease	mg/l	0.1	APHA 23rd Edition, 5520B 2017	BDL(DL:1.4)
25.	Ammonical. Nitrogen as N	mg/l	----	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	—	APHA (23rd Edition) 4500- Norg-B,2017	BDL(DL:0.3)
27.	Sulphide as S	mg/l	—	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.01)
28.	Total Residual Chlorine	mg/l	—	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	—	APHA 23rd Edition,4500P, B –D 2017	BDL(DL:0.05)
30.	Ammonia as NH_3	mg/l	—	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	—	APHA (23rd Edition) 4500- NO3-E, 2017	BDL(DL:0.1)
32.	Bio-assay Test	—	90% survival of fish after 96 hours in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	—	850 µ IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve
34.	Dissolved Oxygen	mg/l	—	APHA 23rd-2012,4500-O-C	6.40

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/046
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/00982
Sample Description : Surface Water
Sampling Location : Raw Water Reservoir
Date of Sampling : 07.03.2021

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standards as per IS 2296	Test Method / Specification	Result
1.	Colour	Hazen	300	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	6.5 - 8.5	APHA 23rd Edition, 4500-H-B	7.10
4.	Copper as Cu	mg/l	1.5	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	1.5	APHA (23rd Edition)4500 - F C/D, 2017	0.32
6.	Iron as Fe	mg/l	50.0	APHA 23rd Edition.3500 Fe B 2017	0.13
7.	Manganese as Mn	mg/l	----	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound as C_6H_5OH	mg/l	0.005	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	0.05	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	0.01	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.05	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	----	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	----	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	----	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	15.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.05	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	----	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	----	APHA 23rd Edition, 2540D	BDL(DL:2.5)
21.	Temperature	Deg C	----	APHA 23rd Edtn,2550 B	28.00
22.	BOD (3days at 25°C)	mg/l	3.0	APHA (23rd Edition)5210B 2017	2.00
23.	COD	mg/l	----	APHA 23rd Edition, 5220B 2017	18.00
24.	Oil & Grease	mg/l	0.1	APHA 23rd Edition, 5520B 2017	BDL(DL:1.4)
25.	Ammonical. Nitrogen as N	mg/l	----	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	----	APHA (23rd Edition) 4500- Norg-B,2017	BDL(DL:0.3)
27.	Sulphide as S	mg/l	----	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.01)
28.	Total Residual Chlorine	mg/l	----	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	----	APHA 23rd Edition.4500P, B –D 2017	BDL(DL:0.05)
30.	Ammonia as NH_3	mg/l	----	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	----	APHA (23rd Edition) 4500- NO3-E, 2017	BDL(DL:0.3)
32.	Bio-assay Test	----	90% survival of fish after 96 hours in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	----	850 µ IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve
34.	Dissolved Oxygen	mg/l	----	APHA 23rd-2012,4500-O-C	6.60

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/047
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/00977
Sample Description : Waste Water
Sampling Location : Near SS -6
Date of Sampling : 07.03.2021

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standard as per Sch.VI of EP Rules, 1986	Test Method / Specification	Result
1.	Colour	Hazen	--------	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	—	5.5 – 9.0	APHA 23rd Edition, 4500-H-B	7.71
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition)4500 - F C/D, 2017	0.53
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition.3500 Fe B 2017	0.64
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	PhenolicCompoun as C_6H_5OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	51.00
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edtn,2550 B	27.00
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	17.60
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	80.00
24.	Oil & Grease	mg/l	10.0	APHA 23rd Edition, 5520B 2017	<1.4
25.	Ammonical Nitrogen as N	mg/l	50.0	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	100.0	APHA (23rd Edition) 4500- Norg-B,2017	1.80
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.1)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition.4500P, B – D 2017	0.32
30.	Ammonia as NH_3	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	2.50
32.	Bio-assay Test	—	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	—	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve

Report Prepared by:

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK DHAMRA 756171 ODISHA

Report No. : BBS/048
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/00977
Sample Description : Waste Water
Sampling Location : Settling Pond
Date of Sampling : 07.03.2021

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standard as per Sch.VI of EP Rules, 1986	Test Method / Specification	Result
1.	Colour	Hazen	--------	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	5.5 – 9.0	APHA 23rd Edition, 4500-H-B	7.78
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition)4500 - F C/D, 2017	0.32
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition.3500 Fe B 2017	0.23
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	PhenolicCompound as C_6H_5OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	27.00
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edtn,2550 B	28.00
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	7.90
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	30.0
24.	Oil & Grease	mg/l	10.0	APHA 23rd Edition, 5520B 2017	BDL(DL:1.4)
25.	Ammonical. Nitrogen as N	mg/l	50.0	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	100.0	APHA (23rd Edition) 4500- Norg-B,2017	0.50
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.1)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition.4500P, B –D 2017	BDL(DL:0.05)
30.	Ammonia as NH_3	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	1.00
32.	Bio-assay Test	—	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	----	Shall pass 850μm IS sieve	TPM/MSK/P&E/3/55	Pass through 850μm IS sieve

Report Prepared by:

Mitra S. K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/049
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/00979
Sample Description : Waste Water
Sampling Location :DRDO South Gate
Date of Sampling : 07.03.2021

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standard as per Sch.VI of EP Rules, 1986	Test Method / Specification	Result
1.	Colour	Hazen	-------	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	5.5 – 9.0	APHA 23rd Edition, 4500-H-B	7.46
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition)4500 - F C/D, 2017	0.64
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition.3500 Fe B 2017	0.80
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	PhenolicCompoun as C_6H_5OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005:
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	226.00
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edtn,2550 B	25.00
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	36.00
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	129.00
24.	Oil & Grease	mg/l	10.0	APHA 23rd Edition, 5520B 2017	BDL(DL:1.4)
25.	Ammonical. Nitrogen as N	mg/l	50.0	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	100.0	APHA (23rd Edition) 4500- Norg-B,2017	BDL(DL:0.3)
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.1)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition.4500P, B –D 2017	0.15
30.	Ammonia as NH_3	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	1.40
32.	Bio-assay Test	----	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	----	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve

Report Prepared by:

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED.
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/050
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/00979
Sample Description : Waste Water
Sampling Location : DRDO North Gate
Date of Sampling : 07.03.2021

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standard as per Sch.VI of EP Rules, 1986	Test Method / Specification	Result
1.	Colour	Hazen	-------	APHA 23rd Edition,2120B 2017	BDL(DL:1.0)
2.	Odour	----	----	APHA 23rd Edition,2150B	Agreeable
3.	pH at 25°C	----	5.5 – 9.0	APHA 23rd Edition, 4500-H-B	7.27
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition)4500 - F C/D, 2017	0.45
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition.3500 Fe B 2017	0.34
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	PhenolicCompoun as C_6H_5OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994; Rffm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	30.00
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edtn,2550 B	27.00
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	22.00
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	78.00
24.	Oil & Grease	mg/l	10.0	APHA 23rd Edition, 5520B 2017	BDL(DL:1.4)
25.	Ammonical. Nitrogen as N	mg/l	50.0	APHA (23rd Edition) 4500-NH3-F 2017	BDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	100.0	APHA (23rd Edition) 4500- Norg-B,2017	3.50
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.1)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Rffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition 4500P, B -D 2017	0.33
30.	Ammonia as NH_3	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	BDL(DL:0.1)
32.	Bio-assay Test	—	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	—	Shall pass 850μm IS sieve	TPM/MSK/F&E/3/55	Pass through 850μm IS sieve

Report Prepared by:

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MSK TESTING • INSPECTION

Date: 01.04.2021

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Water**
Sampling Location	**Dhamra River Mouth**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	28.00	28.00
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	22.00	42.00
5	pH	----	APHA (23rd Edition) 4500-H-B	7.66	7.18
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	30500.00	31100.00
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	18047.00	19021.00
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	62.00	117.00
9	Total Dissolved solids	mg/l	APHA (23rd Edition) 2540C	21576.00	21888.00
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3377.00	3578.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	588.00	554.00
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2789.0	3024.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	11350.00	11600.00
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.00	5.80
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.00	<2.00
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	<4.00	8.00
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.40	<1.40
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	290.00	278.00
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	<0.50	<0.50
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.10	<0.10
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	<0.30	<0.30
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.50	<2.50
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.05	<0.05

Prepared By –

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MSK TESTING • INSPECTION

Date: 01.04.2021

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Water**
Sampling Location	**Dry Bulk Cargo Berth Face**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

SL. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	28.00	27.00
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	34.00	52.00
5	pH	----	APHA (23rd Edition) 4500-H-B	6.96	7.07
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	28500.00	27400.00
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	22780.00	22741.00
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	101.00	161.00
9	Total Dissolved solids	mg/l	APHA (23rd Edition) 2540C	20014.00	20002.00
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3192.00	3326.00
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	521.00	487.00
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2671.0	2839.00
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	10500.00	10400.00
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.10	5.90
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.00	<2.00
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	<4.00	<4.00
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.40	<1.40
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	311.00	278.00
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	<0.50	<0.50
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.10	<0.10
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	<0.30	<0.30
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.50	<2.50
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.05	<0.05

Prepared By –

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MSK TESTING INSPECTION

Date: 01.04.2021

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Water**
Sampling Location	**Liquid/Gas/Cyrogenic Berth Face**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	—	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	27.40	28.10
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	28.00	24.00
5	pH	—	APHA (23rd Edition) 4500-H-B	7.56	7.68
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	31300.00	30400.00
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	22012.0	22986.00
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	74.00	63.00
9	Total Dissolved solids	mg/l	APHA (23rd Edition) 2540C	22338.00	21520.00
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3444.00	3427.00
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	554.00	605.00
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2890.00	2822.00
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	11800.0	11550.00
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.20	6.30
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.00	<2.00
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	<4.00	<4.00
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.40	<1.40
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	315.00	289.00
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	<0.50	<0.50
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.10	<0.10
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	<0.30	<0.30
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rflm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.50	<2.50
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rflm:2014	<0.05	<0.05

Prepared By –

Checked By-

MITRA S.K. PRIVATE LIMITED

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MSK TESTING • INSPECTION

Date: 01.04.2021

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Water**
Sampling Location	**Along Channel at 1Km**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

SL. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	28.10	27.90
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	19.00	22.00
5	pH	----	APHA (23rd Edition) 4500-H-B	7.70	7.23
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	31600.00	31200.00
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	20895.00	22854.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	54.00	53.00
9	Total Dissolved solids	mg/l	APHA (23rd Edition) 2540C	22440.00	22414.00
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3478.00	3427.00
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	504.00	521.00
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2974.00	2906.00
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	11800.0	11800.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.50	6.00
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.00	<2.00
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220D,2017	<4.00	<4.00
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.40	<1.4
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	318.00	296.00
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	<0.50	<0.50
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.10	<0.10
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	<0.30	<0.30
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.50	<2.50
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.05	<0.05

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MITRA S.K. PRIVATE LIMITED

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MSK TESTING • INSPECTION

Date: 01.04.2021

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Water**
Sampling Location	**Along Channel at 5Km**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

SL. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	28.00	28.00
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	19.00	17.00
5	pH	----	APHA (23rd Edition) 4500-H-B	7.81	7.56
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	31700.00	31800.00
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	12156.00	10214.00
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	50.00	55.00
9	Total Dissolved solids	mg/l	APHA (23rd Edition) 2540C	23008.00	23350.00
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3461.00	3528.000
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	504.00	487.00
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2957.00	3041.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	12200.00	12300.00
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	5.70	6.30
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.00	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	<4.00	<4.00
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.40	<1.40
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	524.00	539.0
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	<0.50	<0.50
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.10	<0.10
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	<0.30	<0.30
24	Total Chromium	mg/l	APHA (23rd Editloe) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffirc2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.50	<2.50
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994,Rffirc2014	<0.05	<0.05

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MSK TESTING • INSPECTION

Date: 01.04.2021

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Water**
Sampling Location	**Along Channel at 10Km**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Sl.-No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	28.00	28.00
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	21.00	25.00
5	pH	----	APHA (23rd Edition) 4500-H-B	7.32	7.67
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	31600.00	31700.00
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	6548.00	6129.00
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	60.00	66.00
9	Total Dissolved solids	mg/l	APHA (23rd Edition) 2540C	22092.00	229420.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3377.00	3410.00
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	504.00	487.00
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2873.00	2923.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	11600.00	12000.00
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.40	6.50
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.00	<2.00
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	<4.00	<4.00
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.40	<1.40
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	362.00	385.00
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	<0.50	<0.50
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.10	<0.10
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	<0.30	<0.30
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.50	<2.50
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.05	<0.05

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MSK TESTING • INSPECTION

Date: 01.04.2021

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Water**
Sampling Location	**Near Kanika Island**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	----	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	27.40	28.10
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	22.00	23.00
5	pH	----	APHA (23rd Edition) 4500-H-B	7.81	7.61
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	35000.0	32600.00
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	10210.00	9628.00
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	61.00	65.00
9	Total Dissolved solids	mg/l	APHA (23rd Edition) 2540C	25670.00	23022.00
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3562.00	3578.00
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	537.00	504.00
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	3024.00	3974.00
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	13600.00	12000.00
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.40	6.30
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.00	<2.00
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	<4.00	<4.00
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220B,2017	<1.40	<1.40
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	489.00	572.00
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	1.60	1.00
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	1.80	2.10
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr^{+6})	mg/l	APHA (23rd Edition) ,3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	3.40	ND
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffm:2014	<0.5	<0.5

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MSK TESTING • INSPECTION

Date: 01.04.2021

PHYTOPLANKTONMONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Sample (Phytoplankton)**
Sampling Location	**S1:Dhamra River Mouth** **S3:Liquid/Gas/Cyrogenic Berth Face** **S2:Dry Bulk Cargo Berth Face** **S4:Along Channel at 1Km** **S5:Along Chanel at 5Km** **S6: Along Channel at 10Km** **S7:Near Kanika Island**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Name of the Parameters		**Total count**	**No of species**	**Chlorophyll-a**	**Major Species**
Unit		Units/L	Nos.	mg/l	----
Testing Method		APHA 10200	APHA 10200	APHA 10200H	APHA (23rd Edition) 10200
Analysis Result					
S-1	**Surface Water**	18000	4	0.51	Navicula, Phormidium
	Bottom water	19000	4	0.47	Tabellaria, Enteromorpha
S-2	**Surface Water**	17000	2	0.34	Nereocystis, Zostera
	Bottom water	18000	3	0.62	Fragilaria, Enteromorpha
S-3	**Surface Water**	28000	4	0.49	Desmium, Vallisneria
	Bottom water	15000	4	0.56	Oedogonium, Phormidium
S-4	**Surface Water**	18000	5	0.42	Calothrix, Tribonema
	Bottom water	14000	2	0.38	Enteromorpha, Zostera
S-5	**Surface Water**	23000	5	0.55	Vallisneria, Oscillatoria
	Bottom water	14000	4	0.33	Aphanizomenon, Fragilaria
S-6	**Surface Water**	22000	4	0.40	Vallisneria, Enteromorpha
	Bottom water	20000	4	0.62	Zostera, Cladophora
S-7	**Surface Water**	19000	4	0.36	Cyclotella, Bythotrephas longimanus
	Bottom water	17000	5	0.49	Tribonima, Enteromorpha

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MSK TESTING • INSPECTION

Date: 01.04.2021

ZOOPLANKTONMONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Sample (Zooplankton)**
Sampling Location	**S1:Dhamra River Mouth** **S3:Liquid/Gas/Cyrogenic Berth Face** **S2:Dry Bulk Cargo Berth Face** **S4:Along Channel at 1Km** **S5:Along Chanel at 5Km** **S6: Along Channel at 10Km** **S7:Near Kanika Island**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Name of the Parameters		**Total count**	**No of species**	**Major Species**
Unit		Units/L	Nos.	----
Testing Method		APHA 10200	APHA 10200	APHA (23rd Edition) 10200
Analysis Result				
S-1	**Surface Water**	None	None	None
	Bottom water	None	None	None
S-2	**Surface Water**	None	None	None
	Bottom water	None	None	None
S-3	**Surface Water**	1000	1	Daphnia
	Bottom water	1000	1	Bythotrephes longimanus
S-4	**Surface Water**	None	None	None
	Bottom water	None	None	None
S-5	**Surface Water**	3000	1	Daphnia
	Bottom water	800	1	Nauplius
S-6	**Surface Water**	2000	1	Daphnia
	Bottom water	None	None	None
S-7	**Surface Water**	None	None	None
	Bottom water	2000	1	Monia

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MSK TESTING • INSPECTION

Date: 01.04.2021

MICROBIOLOGICAL MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/002337
Type of Sample	Marine Sample (Microbiological)
Sampling Location	S1:Dhamra River Mouth S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	06.03.2021
Date of Analysis	07.03.2021 to 25.03.2021
Sampling Done by	Mr. Kunja Bihari Nayak

Name of the Parameters		Total Bacteria count	Total Coliform	Faecal Coliform	E. coli	Enterococcus	Salmonella	Shigella	Vibrio
Unit		CFU/ml	MPN/100ml	MPN/100ml	MPN/100ml	CFU/ml	/100ml	/100ml	/100ml
Testing Method		APHA 5th Edn	APHA 9221 B	APHA 9221 E	APHA 9221 F	IS 5887(Part-II)	IS 5887(Part-III)	IS 5887(Part-VII)	IS 5887(Part-V)
Analysis Result									
S-1	Surface Water	70.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	43.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-2	Surface Water	125.0	6.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	45.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-3	Surface Water	24.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	5.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-4	Surface Water	50.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	18.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-5	Surface Water	78.0	6.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	10.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-6	Surface Water	80.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	40.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-7	Surface Water	52.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	20.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent

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MSK TESTING • INSPECTION

Date: 01.04.2021

PRIMARY PRODUCTIVITYMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800058096
Reference No.	MSKGL/ED/2020-21/002337
Type of Sample	Marine Sample (Productivity)
Date of Sampling	06.03.2021
Date of Analysis	07.03.2021 to 25.03.2021
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Monitoring Location		Gross Primary productivity (O2mg/L/day)	Net Primary productivity (O2mg/L/day)
1	S1:Dhamra River Mouth	Surface Water	4.2	2.3
		Bottom water	3.4	1.2
2	S2:Dry Bulk Cargo Berth Face	Surface Water	3.1	1.0
		Bottom water	2.8	1.5
3	S3:Liquid/Gas/Cyrogenic Berth Face	Surface Water	3.6	2.0
		Bottom water	4.1	2.4
4	S4:Along Channel at 1Km	Surface Water	3.7	2.2
		Bottom water	2.3	1.3
5	S5:Along Chanel at 5Km	Surface Water	3.8	2.6
		Bottom water	3.4	1.5
6	S6: Along Channel at 10Km	Surface Water	2.9	1.6
		Bottom water	3.0	1.4
7	S7:Near Kanika Island	Surface Water	2.3	1.1
		Bottom water	3.3	1.4

Prepared By –

Checked By-

MITRA S.K. PRIVATE LIMITED

Mitra S. K. Private Limited

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

Date: 01.04.2021

PHYTO BENTHOSMONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Sample**
Sampling Location	**S1:Dhamra River Mouth S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Name of the Parameters		Fungus	Total Count	No of species	Diversity Index	Major species
Unit		CFU/g dry wt.	50 mg wet sediment	Nos.	--	--
Testing Method		APHA 9610 B	APHA 9215 B,C	APHA 10500 B	By Calculation (Shanon's Index)	APHA 10500 B
Analysis Result						
S-1	**Surface Water**	3100	260	16	1.9762	Nitzschia, Coscinodiscuss
	Bottom water	2700	340	8	0.8261	Pleurosigma, Bidulphia
S-2	**Surface Water**	2400	265	7	0.8765	Nitzschia, Coscinodiscuss, Pleurosigma
	Bottom water	1420	239	4	0.6541	Podasira, Pleurosigma Thalassiosira
S-3	**Surface Water**	2500	306	9	0.9542	Ctenophora, Coscinodiscuss
	Bottom water	1100	275	5	0.8766	N.longsigma, Navicula
S-4	**Surface Water**	2700	253	11	1.0879	Ditylum, Bidulphia
	Bottom water	2100	266	8	0.9645	N.longsigma, Echinodermata
S-5	**Surface Water**	2600	199	7	0.9549	Podasira, Copepods
	Bottom water	2000	377	14	1.2996	Ditylum, Echinodermata
S-6	**Surface Water**	2400	439	7	0.8896	Podasira, Ditylum
	Bottom water	2100	433	10	1.0234	Echinodermata, Copepods
S-7	**Surface Water**	1900	321	9	0.9849	N.longsigma, Podasira
	Bottom water	1230	498	17	1.9934	Ctenophora

Prepared By –

Checked By

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MSK TESTING • INSPECTION

Date: 01.04.2021

TOTAL FAUNA MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800058096**
Reference No.	**MSKGL/ED/2020-21/002337**
Type of Sample	**Marine Sample**
Sampling Location	**S1:Dhamra River Mouth S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island**
Date of Sampling	**06.03.2021**
Date of Analysis	**07.03.2021 to 25.03.2021**
Sampling Done by	**Mr. Kunja Bihari Nayak**

Name of the Parameters		Name of phylum	Class & No. of individuals encountered	Total no of species encountered	Total fauna per m³
Testing Method		APHA 10700	APHA 10700	APHA 10700	APHA 10700
			Analysis Result		
S-1	**Surface Water**	Annelida, Mollusca	Plychaeta-16,Bivalvia-11	50	123
	Bottom water	Annelida, Mollusca	Plychaeta-18,Bivalvia-24	68	289
S-2	**Surface Water**	Annelida, Mollusca	Plychaeta-19,Bivalvia-10	54	416
	Bottom water	Annelida, Mollusca	Plychaeta-16,Bivalvia-11	66	164
S-3	**Surface Water**	Anthropoda, Annelida	Plychaeta-36,Bivalvia-24	72	271
	Bottom water	Annelida, Mollusca	Plychaeta-22,Bivalvia-17	49	139
S-4	**Surface Water**	Annelida, Mollusca	Plychaeta-24,Bivalvia-04	55	245
	Bottom water	Annelida, Mollusca	Plychaeta-26,Bivalvia-13	67	92
S-5	**Surface Water**	Annelida, Mollusca	Plychaeta-28,Bivalvia-19	50	422
	Bottom water	Annelida, Mollusca	Plychaeta-36,Bivalvia-21	38	266
S-6	**Surface Water**	Anthropoda, Annelida	Copepoda-19,Pelecypoda-09	42	196
	Bottom water	Annelida, Mollusca	Copepoda-26,Pelecypoda-11	56	306
S-7	**Surface Water**	Anthropoda, Annelida	Copepoda-21,Pelecypoda-13	49	218
	Bottom water	Anthropoda, Annelida	Plychaeta-44,Gastropoda-17	72	172

Prepared By –

MITRA S.K. PRIVATE LIMITED

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MSK TESTING•INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/060
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01101
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 02.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.69
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1637.00
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.30
4.	Moisture content	%	Lab Method	30.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1568.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	385.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.00
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.30
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	24.10
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1513.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	403.00
13.	Copper (as Cu)	mg/kg	EPA 6010D	22.00
14.	Nickel (as Ni)	mg/kg	EPA 6010D	16.00
15.	Zinc (as Zn)	mg/kg	EPA 6010D	49.00
16.	Manganese (as Mn)	mg/kg	EPA 6010D	352.00

MSK TESTING • INSPECTION

Ref. No. BBS/060

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	8.00
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.00
19.	Aluminium (as Al)	mg/kg	EPA 6010D	3023.00
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	16.40
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	404.00
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	381.00
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	37.00
26.	Silt	%	TPM/MSK/P&E/1/36A	22.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	41.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	3500
2.	Total count (Phytobenthos)	50 mg wet sediment	174
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	1.39
5.	Major Species (phytobenthos)	----	*Coscinodiscus* sp.,*Biddulphia mobilensis*, *Nitzschia*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-23,Bivalvia-10
8.	Total no. of species encountered (Fauna)	Nos.	33
9.	Total fauna (Fauna)	per m^3	287

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/061
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01102
Sample Description : Sea Sediment
Sampling Location : Dredging Source Area
Date of sampling : 02.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.64
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1721.00
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.10
4.	Moisture content	%	Lab Method	25.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1587.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	76.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.00
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	3.10
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	19.00
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1400.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	401.00
13.	Copper (as Cu)	mg/kg	EPA 6010D	14.00
14.	Nickel (as Ni)	mg/kg	EPA 6010D	11.00
15.	Zinc (as Zn)	mg/kg	EPA 6010D	42.00
16.	Manganese (as Mn)	mg/kg	EPA 6010D	271.00

MSK TESTING • INSPECTION

Ref. No. BBS/061

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	9.000
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.00
19.	Aluminium (as Al)	mg/kg	EPA 6010D	4102.00
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	28.00
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	386.00
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	346.00
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	27.00
26.	Silt	%	TPM/MSK/P&E/1/36A	24.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	49.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	3100
2.	Total count (Phytobenthos)	50 mg wet sediment	229
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	1.62
5.	Major Species (phytobenthos)	----	*Biddulphia mobilensis, Gyrosigma* sp., *Thalassiosira*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-19,Bivalvia-13
8.	Total no. of species encountered (Fauna)	Nos.	42
9.	Total fauna (Fauna)	per m^1	389

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/062
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01103
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 17.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.92
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1584.00
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.50
4.	Moisture content	%	Lab Method	20.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1620.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	359.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.00
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	3.70
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	22.00
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1498.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	378.00
13.	Copper (as Cu)	mg/kg	EPA 6010D	19.00
14.	Nickel (as Ni)	mg/kg	EPA 6010D	16.80
15.	Zinc (as Zn)	mg/kg	EPA 6010D	38.00
16.	Manganese (as Mn)	mg/kg	EPA 6010D	338.00

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/062

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	4.00
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.00
19.	Aluminium (as Al)	mg/kg	EPA 6010D	2891.00
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	15.00
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	281.00
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	256.00
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	35.00
26.	Silt	%	TPM/MSK/P&E/1/36A	29.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	36.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	3800
2.	Total count (Phytobenthos)	50 mg wet sediment	228
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	1.79
5.	Major Species (phytobenthos)	----	*Coscinodiscus* sp. , *Spirulina aeruginea, Gyrosigma*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-14,Bivalvia-18
8.	Total no. of species encountered (Fauna)	Nos.	32
9.	Total fauna (Fauna)	per m^3	281

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/063
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01104
Sample Description : Sea Sediment
Sampling Location : Dredging Source Site
Date of sampling : 17.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.93
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	1654.00
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.59
4.	Moisture content	%	Lab Method	22.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1610.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	102.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.00
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	2.80
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	16.00
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1369.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	354.00
13.	Copper (as Cu)	mg/kg	EPA 6010D	11.00
14.	Nickel (as Ni)	mg/kg	EPA 6010D	12.30
15.	Zinc (as Zn)	mg/kg	EPA 6010D	37.00
16.	Manganese (as Mn)	mg/kg	EPA 6010D	258.00

MSK TESTING • INSPECTION

Ref. No. BBS/063

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	6.00
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.00
19.	Aluminium (as Al)	mg/kg	EPA 6010D	3921.00
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	24.00
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	258.00
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	252.00
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	40.00
26.	Silt	%	TPM/MSK/P&E/1/36A	26.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	34.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	2700
2.	Total count (Phytobenthos)	50 mg wet sediment	179
3.	No of species (Phytobenthos)	Nos.	2
4.	Diversity index (Phytobenthos)	—	1.21
5.	Major Species (phytobenthos)	—	*Coscinodiscus, Gyrosigma* ,
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-13,Bivalvia-08
8.	Total no. of species encountered (Fauna)	Nos.	21
9.	Total fauna (Fauna)	per m^3	189

Report Prepared by:

MITRA S.K.

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited
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Bhubaneswar - 751015
[CIN: U51909WB1956PTC023037]

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/064
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01105
Sample Description : Sea Sediment
Sampling Location : Dhamra River Mouth
Date of sampling : 06.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.21
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2702.00
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.20
4.	Moisture content	%	Lab Method	22.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1125.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	429.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	5.30
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	4.60
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1902.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	421.00
13.	Copper (as Cu)	mg/kg	EPA 6010D	3.70
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.20
15.	Zinc (as Zn)	mg/kg	EPA 6010D	6.10
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/064

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	4.00
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	3.81
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.40
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	3.50
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	2.20
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	46.00
26.	Silt	%	TPM/MSK/P&E/1/36A	28.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	26.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	2500
2.	Total count (Phytobenthos)	50 mg wet sediment	351
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	1.79
5.	Major Species (phytobenthos)	—	*Coscinodiscuss, Navicula, Gyrosigma*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-14,Bivalvia-18
8.	Total no. of species encountered (Fauna)	Nos.	32
9.	Total fauna (Fauna)	per m^3	381

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/065
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01106
Sample Description : Sea Sediment
Sampling Location : Dry Bulk Cargo Berth Face
Date of sampling : 06.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.62
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3124.00
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.52
4.	Moisture content	%	Lab Method	24.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1256.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	241.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.00
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	5.10
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2104.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	436.00
13.	Copper (as Cu)	mg/kg	EPA 6010D	2.90
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.10
15.	Zinc (as Zn)	mg/kg	EPA 6010D	5.70
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

MSK TESTING • INSPECTION

Ref. No. BBS/065

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	2.00
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	3.70
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	1.60
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	5.00
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	1.80
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	58.00
26.	Silt	%	TPM/MSK/P&E/1/36A	26.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	16.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	2100
2.	Total count (Phytobenthos)	50 mg wet sediment	309
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	—	1.32
5.	Major Species (phytobenthos)	—	*Bidulphia, Coscinodiscuss, Pleurosigma*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-29,Bivalvia-17
8.	Total no. of species encountered (Fauna)	Nos.	46
9.	Total fauna (Fauna)	per m^3	429

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

MITRA S.K. PRIVATE LIMITED

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/066
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01107
Sample Description : Sea Sediment
Sampling Location : Liquid/Gas/Cyrogenic Berth Face
Date of sampling : 06.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.42
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3721.00
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.71
4.	Moisture content	%	Lab Method	29.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	836.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	843.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	4.80
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1824.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	694.0
13.	Copper (as Cu)	mg/kg	EPA 6010D	2.20
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.70
15.	Zinc (as Zn)	mg/kg	EPA 6010D	4.00
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

MSK TESTING • INSPECTION

Ref. No. BBS/066

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	4.90
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	2.20
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.50
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	5.70
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	1.30
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	49.00
26.	Silt	%	TPM/MSK/P&E/1/36A	30.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay
28.	Clay	%	TPM/MSK/P&E/1/36A	21.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	2600
2.	Total count (Phytobenthos)	50 mg wet sediment	358
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	1.97
5.	Major Species (phytobenthos)	---	*Coscinodiscuss, Pleurosigma , Navicula.*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Plychaeta-20,Bivalvia-22
8.	Total no. of species encountered (Fauna)	Nos.	44
9.	Total fauna (Fauna)	per m^3	434

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/067
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01108
Sample Description : Sea Sediment
Sampling Location : Along Channel at 1 km
Date of sampling : 06.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.48
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	7021.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.72
4.	Moisture content	%	Lab Method	30.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	714.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	612.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	2.40
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	51.00
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2812.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	932.00
13.	Copper (as Cu)	mg/kg	EPA 6010D	2.40
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.70
15.	Zinc (as Zn)	mg/kg	EPA 6010D	5.10
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

MSK TESTING • INSPECTION

Ref. No. BBS/067

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	1.10
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	1.90
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	1.50
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	7.80
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.40
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	52.00
26.	Silt	%	TPM/MSK/P&E/1/36A	28.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	20.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	2700
2.	Total count (Phytobenthos)	50 mg wet sediment	283
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	—	1.8
5.	Major Species (phytobenthos)	—	*Bidulphia, Coscinodiscuss, Pleurosigma, Nitzschia,*
6.	Name of Phylum (Fauna)	—	Annelida
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-29
8.	Total no. of species encountered (Fauna)	Nos.	29
9.	Total fauna (Fauna)	per m^3	384

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/068
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01109
Sample Description : Sea Sediment
Sampling Location : Along Channel at 5 km
Date of sampling : 06.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.54
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	6018.00
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.67
4.	Moisture content	%	Lab Method	23.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	632.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	512.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	2.80
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	46.00
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2895.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	709.00
13.	Copper (as Cu)	mg/kg	EPA 6010D	2.10
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.40
15.	Zinc (as Zn)	mg/kg	EPA 6010D	7.00
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/068

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	1.80
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	2.10
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.80
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	7.00
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.00
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	56.00
26.	Silt	%	TPM/MSK/P&E/1/36A	27.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	17.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	3100
2.	Total count (Phytobenthos)	50 mg wet sediment	389
3.	No of species (Phytobenthos)	Nos.	7
4.	Diversity index (Phytobenthos)	----	1.97
5.	Major Species (phytobenthos)	----	*Coscinodiscuss, Navicula,Gyrosigma, Bidulphia,*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-24,Bivalvia-17
8.	Total no. of species encountered (Fauna)	Nos.	41
9.	Total fauna (Fauna)	per m^3	415

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

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MSK TESTING • INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/069
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01110
Sample Description : Sea Sediment
Sampling Location : Along Channel at 10 km
Date of sampling : 06.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.21
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	6124.00
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.84
4.	Moisture content	%	Lab Method	32.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	735.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	611.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	52.00
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2236.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	1236.00
13.	Copper (as Cu)	mg/kg	EPA 6010D	1.60
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.00
15.	Zinc (as Zn)	mg/kg	EPA 6010D	6.80
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

MSK TESTING • INSPECTION

Ref. No. BBS/069

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	1.20
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	1.60
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	1.50
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	6.60
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.10
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	41.00
26.	Silt	%	TPM/MSK/P&E/1/36A	36.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	23.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	3800
2.	Total count (Phytobenthos)	50 mg wet sediment	274
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	----	1.53
5.	Major Species (phytobenthos)	----	*Bidulphia, Coscinodiscuss sp.,*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Plychaeta-14,Bivalvia-07
8.	Total no. of species encountered (Fauna)	Nos.	21
9.	Total fauna (Fauna)	per m^3	329

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING INSPECTION

TEST REPORT

Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED
AT: DOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/070
Date : 01.04.2021
Sample No. : MSKGL/ED/2020-21/03/01111
Sample Description : Sea Sediment
Sampling Location : Near Kanika Island
Date of sampling : 06.03.2021

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.14
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	5985.00
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.71
4.	Moisture content	%	Lab Method	25.00
5.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	426.00
6.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	551.00
7.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.00
8.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
9	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
10	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	2.70
11.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2796.00
12.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	641.00
13.	Copper (as Cu)	mg/kg	EPA 6010D	2.10
14.	Nickel (as Ni)	mg/kg	EPA 6010D	1.02
15.	Zinc (as Zn)	mg/kg	EPA 6010D	3.80
16.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

MSK TESTING • INSPECTION

Ref. No. BBS/070

Date- 01.04.2021

17.	Lead (as Pb)	mg/kg	EPA 6010D	1.20
18.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	2.00
19.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
20.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.30
21.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	5.20
22.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.60
23.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
24.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.50
25.	Sand	%	TPM/MSK/P&E/1/36A	42.00
26.	Silt	%	TPM/MSK/P&E/1/36A	33.00
27.	Texture	None	TPM/MSK/P&E/1/36A	Loam
28.	Clay	%	TPM/MSK/P&E/1/36A	25.00

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	3500
2.	Total count (Phytobenthos)	50 mg wet sediment	374
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	1.99
5.	Major Species (phytobenthos)	----	*Bidulphia,Navicula Synedra, Gyrosigma*
6.	Name of Phylum (Fauna)	----	Anthropoda, Annelida
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-24,Bivalvia-18
8.	Total no. of species encountered (Fauna)	Nos.	42
9.	Total fauna (Fauna)	per m^3	481

Report Prepared by:

MITRA S.K. PRIVATE LIMITED

For Mitra S.K. Private Limited

Authorized Signatory

ANNEXURE-IV

THE DHAMRA PORT COMPANY LIMITED

Environment Management Plan

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
1	Capital dredging/ Reclamation/ Disposal/ Construction of Approach Trestle/ Berths and other offshore structures such as seawater intake/ marine outfall	Marine water Quality	- Increase in turbidity - Change in marine water quality due to aqueous discharges (oily waste, sanitary wastes) from dredgers, barges and workboats. - Spill of Bentonite Clay during pile driving.	- Check turbidity levels with baseline levels as reference during entire monitoring programme - Dredge Management Programme. - Discharge of waste into sea will be prohibited. - Oil Spill control measures will be adopted. - Ensure that slop tanks are provided to barges/ workboats for collection of liquid/ solid waste. - Recirculation/Reuse of Bentonite clay and adoption of better construction methods to minimise the spill on marine environment. - Adoption Standard Reclamation methods with containment system to retain the solid inside the reclamation area. - Disposal of unused Dredged material at the identified offshore disposal area only. - Marine environmental monitoring as per environmental monitoring programme.	Dredging is being carried out in the areas identified and approved as a part of Revised Master plan. As a part of existing operation, Periodic marine water quality monitoring including turbidity is carried out near Kanika island by engaging MOEFCC approved laboratory. The details of Marine Water quality monitoring reports for the period Oct'20 to Mar'21 are enclosed as **Annexure III.**
		Marine ecology	Marine Ecology of this environment is already subjected to the changes due to maintenance dredging activities and hence the net impact will be minimal. Some of the likely impacts are: - Decrease in DO levels. - Increase in noise levels. - Disturbance to benthic communities. - Changes in species diversity and density in areas adjoining dredging site. - Smothering or blanketing of sub-tidal communities.		
		Mangrove area	- Impact on 9ha mangrove near the southern boundary. - Impact on mangroves near northern boundary.	- DPCL has excluded scattered mangroves identified near the southern boundary of the port in phase I development from the port activity and implementing the conservation measures. During the	Noted & will be complied. As a part of existing operation periodic monitoring program covering all seasons on various aspects of the marine ecology

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
			- Impact on mangroves at Kanika Island.	planning stage, a channel for seawater influx is considered to the mangrove area. - Care shall be taken during reclamation near northern and southern side mangroves and reclamation bund shall be constructed to ensure that no impact on them. Construction of Northern rail link will pass through the sparse mangrove patch. It is estimated that ~0.1 ha of mangrove area will come under the development of utility corridor where the corridor will be developed on piles. Considering the mangrove footprint, 10 times of mangrove plantation will be done. - Minimum 50 m buffer has been provided near the Northern mangrove area and all the construction will be limited as per plan. - Discharge of toxic/hazardous materials during the port construction would not be allowed. - Revised Master Plan ensures the Tidal exchange near the mangrove area which is also ensured by of hydrodynamic modelling studies. - Dredge spoil should not be entered into mangrove area. - Awareness will be imparted to workers in the port about the importance of mangroves and their conservation.	monitoring is being carried out by NABL & MoEFCC accredited laboratory.
		Impact on turtle/Other	- Accidental take during dredging.	- The channel area is well away from the turtle congregation area and hence	Noted

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
		Macro Fauna	- Light Glare on Nesting	there is no regular movement of turtle into the channel area. - DPCL to take appropriate measures to avoid accidental take of turtle during dredging. - Install specialised illumination system in line with "International Dark Sky Association (IDA)" to avoid glare to the sky or focusing light towards sea. - Mercury vapour and metal halides will not be used. Sodium vapour lamps will be used	
		Fishermen and fishing villages	- Local Fishermen approach to sea. - Impact on fishing due to Construction works. - Fishing harbour is located in Dhamra River at 6.5 km southwest boundary of the port. The fishing boats travels all through the Dhamra River and enter into sea. The approach channel of the port is oriented from south to boats travels from south to east. Fishing is being carried out at deep sea. Therefore, significant impact on fishing is not envisaged.	- Proper access to the sea for the local fishermen is considered during planning stage itself. - This is an existing port hence no direct impact is envisaged. Signboards will be placed at the construction activities in order to make fishermen aware of the on-going construction activities - Necessary marker buoys will be installed - Regular Interactions will be initiated with the fishing community before commencement of construction works - Construction shall be limited to as per the development plan.	Noted
2	Materials transport and construction activities.	Air Quality	- Exhaust emissions from vehicles. - Windblown dust during material movement.	- To reduce impacts from exhausts, emission control norms will be enforced /adhered. - All the vehicles and construction machinery will be periodically checked	Complied. As a part of existing operation, air pollution mitigation measures are being adopted.

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
			- Fugitive dust during construction material unloading. - Dust suspension during site preparation, construction. - Emissions from DG Sets.	to ensure compliance to the emission standards. - Construction equipment and transport vehicles will be periodically washed to remove accumulated dirt. - Providing adequately sized construction yard for storage of construction materials, equipment tools, earthmoving equipment, etc. - Provide enclosures on all sides of construction site. - Movement of material will be mostly during nonpeak hours. - On-site vehicle speeds will be controlled to reduce excessive dust suspension in air and dispersion by traffic. - Water sprinkling will be carried out to suppress fugitive dust. - Environmental awareness program will be provided to the personnel involved in developmental works. - Use of tarpaulin covers and speed regulations for vehicles engaged in transportation.	
		Noise	Noise from following activities - Vehicles transporting construction material. - Diesel run engines of construction machinery and dredgers - Pile driving activities during construction of Approach trestle/cargo berths etc.,	- Noise levels will be maintained below threshold levels stipulated by Central Pollution Control Board /Odisha State Pollution Control Board (CPCB)/OSPCB. - Procurement of machinery / construction equipment will be done in accordance with specifications conforming to source noise levels less than 75 dB (A).	Noted. As a part of existing operation Noise monitoring is carried out on monthly basis by engaging accredited NABL & MOEFCC laboratory. The Monitoring results are also submitted to the Regional office on regular basis. The copy is enclosed as **Annexure - III.**

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				- Well-maintained construction equipment, which meets the regulatory standards for source noise levels, will be used. - Any equipment emitting high noise, wherever possible, will be oriented so that the noise is directed away from sensitive receptors. - Noise attenuation will be practised for noisy equipment by employing suitable techniques such as acoustic controls, insulation and vibration dampers. - High noise generating activities such as piling and drilling will be scheduled at daytime (6.00am to 10 pm) to minimise noise impacts. - Personnel exposed to noise levels beyond threshold limits will be provided with personal protective equipment's such as earplugs, ear muffs, etc. - Ambient noise levels will be monitored at regular intervals. - Exercise route selection, traffic regulations, timings etc.,	
		Disturbance to Natural Drainage pattern.	- Impact to natural flow of runoff due to reclamation and change of drainage course.	- Storm water runoff will be directed as per the storm water drainage network proposed considering the existing drainage pattern and from village area and port area into the sea. - Requirements of villagers for tide water and boat movement has been duly considered in the drainage plan. - Prudent Planning of Layout– Mathematical Modelling Studies	Noted. Drainage pattern of the area is maintained. Creeks are periodically cleaned to ensure free flow of water from both outside and inside. Further inline to Revised Master Plan proper drainage facility will be developed as per the drainage plan.

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				shows Flow regime changes for various tidal conditions in the study domain after the proposed expansion development of the - Port are predicted to be not of much significance and is limited to the development location mostly and found to be very much local in nature. No change in the flow regime of the rest of the domain is observed.	
		Vegetation and Strain on existing Infrastructure	- Loss of vegetation and strain on existing infrastructure.	- The area being highly saline and Sea/Submerged inter tidal zone, no Major vegetation is present in the proposed expansion area except a narrow strip of throny bushes. - Construction activities shall be limited within the site and dust shall be contained within the construction area.	Noted
		Existing Traffic	- Traffic addition	- The existing approach road to Dhamra Port is being widened by GoO which will improve the traffic conditions. - Proposed National Water Way (NW-5) will also be used for the transport of part of construction material which will reduce likely congestion on road. - In addition, approval has already been obtained by DPCL for 4 lane road and 2 rail tracks (as a part of Phase I & II Clearance). As a part of Revised Master Plan, it is to develop further additional 2 lane road and 1 rail tracks. Traffic Wardens shall be deployed for regulating the traffic.	Noted. DPCL has an exclusive rail connectivity for the project and has proposal for future expansion of rail-road connectivity. Besides, DPCL has participated with PWD for maintenance and improvement of the main service road to Dhamra and has shared the cost of development. As a part of RMP EIA studies, Traffic study was conducted for assessment & evaluation of feasibility of Four Lane road (which is already approved as a part of

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				- Drivers should be sensitized with respect to need to drive carefully while passing village areas. - Speed of the trucks shall be controlled by providing speed breakers, sign boards and other appropriate speed control techniques. - Proper lighting, signboards shall be provided at required locations.	Phase –II clearance) with future provision of Two lane, to be developed as a part of Revised Master Plan to connect Bhadrak & Dhamra Port. Based on this – 1. Both Normal traffic + Generated traffic (due to proposed expansion) considered for the study. 2. Four lane (which is already approved as a part of Phase –II clearance) with future provision of 2 lane road, to be developed as a part of Revised Master Plan is proposed, which shall be sufficient to meet the Port Requirement as per the IRC guidelines. Existing approach road from Jamujhadi to Dhamra will be utilized during construction phase (apart from proposed NW-5) which is being widened by GoO which will improve the traffic conditions. Proposed road link will induce local traffic movement on either side and boost the travel characteristics of the people residing in nearby villages addition, for easy evacuation of cargo, a new Rail/Road/Utility Corridor (12 km x 125 m wide) is also proposed from Northern side of Dhamra Port.

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
3	Land Reclamation	Existing Water Resources like Groundwater and surface water	- Proposed expansion is planned in an additional area of 1323.4 Ha. Out of which approximately 1075.7 Ha land will be reclaimed and 247.7 Ha of land is proposed applied land. The proposed development of master plan site falls in saline and Sea/Submerged intertidal area without any macro vegetation, habitation and built-up area. The applied land to be reclaimed will be saline mud and will be separated from the adjoining land mass through the salt dyke. This being an intertidal zone which is sloping towards sea, therefore, there will be no impact on groundwater quality. - Construction phase water requirement will be met through existing sources .i.e. Matai River.	- Existing protective bunds (salt dyke) and slope gradient will prevent inundation of salt water to the adjoining land. - Return seawater from reclamation areas will be channeled back to sea.	Noted
4	Solid Waste Management	Soil quality	- Impacts due to disposal of solid waste on ground	- Proper waste Management practice is being followed and shall be extended. - General refuse generated on-site will be collected in waste skips and separated from construction waste.	Noted DPCL has developed a vision for making itself – "A Zero Waste to Landfill Port" by adoption of 5R principle of waste management i.e

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				- Other Construction waste will be used within port site for filling of low lying areas. - Solid Waste Management Rules, 2016 and Construction & Demolition Waste Management Rules, 2016 (as amended) will be followed for environmental sound management of respective waste. - Burning of refuse at construction sites will be prohibited.	Reduce, Reuse, Reprocess, Recycle & Recover. During the period Oct'20 to Mar'21, a total quantity of MT 91.052 MT of solid waste has been handled in line to 5R concept. We have color coded bins for segregating different category of solid waste. Biodegradable wastes are used for compost preparation. Recyclable wastes are handed over to authorized recyclers.
5	Handling of hazardous wastes	Human safety and property/ Environment Loss	- Fire accidents due to hazardous material handling. - Impact on Terrestrial and Marine Environment.	- Hazardous and other waste Management Rules, 2016 (as amended) will be followed for environmental sound management of hazardous waste. - Adequate safety measures as per OSHA - standards will be adopted. - Construction site will be secured by fencing with controlled/limited entry points. - Hazardous materials such as lubricants, paints, compressed gases, and varnishes etc., will be stored as per the prescribed/approved safety norms. - Construction site will be secured by fencing with controlled/ limited entry points. - Medical facilities including first aid will be made available for attending to injured workers.	Noted

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				- Handling and storage as per statutory guidelines. - Positive isolation procedures will be adhered. - Hazardous wastes will be disposed through approved OSPCB/CPCB vendors.	
6	Water Resources	Existing Water Resources like Groundwater and surface water	- Impacts to the surface water body	- Water required during construction activity will be met through existing water supply system from Matai River. - Groundwater table at Dhamra is high due to high rainfall. However, optimization of water resource will be done. - Prudent Planning of Layout - Based on existing drainage pattern and catchment area, main outfall drains are proposed to carry storm water discharge from village area and port area and discharging into seas. - Care will be taken to prevent the runoff from the construction site to the nearby natural streams connecting to rivers. - Construction camp wastewater will be collected and treated. Treated wastewater will be used for Plantation/Greenbelt development.	Noted
Operational Phase					
1	Cargo handling and Inland Cargo	Air Quality	- Emissions from loading/ unloading equipment, DG sets, vehicular dust emissions, fugitive	- Most of the cargo transportation through rail and Pipelines (~ 70%). - Use of specialized ship loaders/unloaders,	Noted

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
	movement and storage areas, Regasification process and equipment operation such as pumps, compressors, etc.,		emissions from storage areas, Emissions from vessels visiting Dhamra Port, Vehicular emissions due to cargo transport, emissions from LNG/LPG regasification process, spillage of cargo etc., - Air Quality Modelling study is carried out to Predict the GLCs at the receptors due to Fugitive emissions from Dry bulk cargo stockyard and Vehicular movements, etc., and it is found that resultant concentrations are well within the NAAQs standards at all receptors.	- wagon tippler, track Hopper, covered conveyors and rapid loading system through silos. - Use of -low Sulphur diesel fuel is proposed. - Dust Suppression measures at loading/unloading points, wagon tippler complex, Track Hoppers, transfer points, stock yards, rapid loading system and at internal roads. - Scientific and regulated stacking of cargo piles - Wind screens will be provided along stack yard. - Periodic cleaning of cargo spills. - Use of tarpaulin covers and speed regulations for vehicles/wagons engaged in transportation. - Greenbelt Development. - Proper housekeeping. - Regularization of truck movement. - Vessels visiting the facility shall meet emission standards as per MARPOL. - Use of Eco-friendly regasification technology such as Seawater based/ Ambient Air Based for LNG Regasification.	
		Noise	- Due to equipment handling and vehicular movement. - Ship unloading operations. - Due to Regasification Process and equipment operation.	- Acoustic Barriers and Enclosures. - Personal Protective Equipment (PPE). - Greenbelt Development. - Counselling and traffic regulation.	Noted. As a part of existing operation Noise monitoring is carried out on monthly basis by engaging accredited NABL & MOEFCC laboratory. The Monitoring results are also submitted to the Regional

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
					office on regular basis. The copy is enclosed as **Annexure - III.**
		Traffic Addition	Cargo movement from/to port	- Most of the cargo transportation through rail and Pipelines (~ 70%). - Proposed National Water Way (NW-5) will also be used for the transport of cargos which will reduce likely congestion on road. - Approval has already been obtained by DPCL for 4 lane road and 2 rail tracks (as a part of Phase I & II Clearance). As a part of Revised Master Plan, it is to develop further additional 2 lane road and 1 rail tracks in the existing corridor. - 125 m wide corridor is meant to accommodate three rail tracks, a six-lane road, an electric overhead transmission line, utility corridor and side drain. This will be sufficient to cater the DPCL revised master Plan transportation requirements. - rail, road and utilities corridor (approx.12km x - 125m wide) is also proposed from Northern side - development of Dhamra Port. - In addition, for easy evacuation of cargo, a new rail, road and utilities corridor (approx.12km x 125m wide) is also proposed from Northern side development of Dhamra Port.	Noted. DPCL has an exclusive rail connectivity for the project and has proposal for future expansion of rail-road connectivity. Besides, DPCL has participated with PWD for maintenance and improvement of the main service road to Dhamra and has shared the cost of development. As a part of RMP EIA studies, Traffic study was conducted for assessment & evaluation of feasibility of Four Lane road (which is already approved as a part of Phase –II clearance) with future provision of Two lane, to be developed as a part of Revised Master Plan to connect Bhadrak & Dhamra Port. Based on this – 3. Both Normal traffic + Generated traffic (due to proposed expansion) considered for the study. 4. Four lane (which is already approved as a part of Phase –II clearance) with future provision of 2 lane road, to be developed as a part of Revised Master Plan is proposed, which shall be sufficient to

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
					meet the Port Requirement as per the IRC guidelines. Existing approach road from Jamujhadi to Dhamra will be utilized during construction phase (apart from proposed NW-5) which is being widened by GoO which will improve the traffic conditionsProposed road link will induce local traffic movement on either side and boost the travel characteristics of the people residing in nearby villages addition, for easy evacuation of cargo, a new Rail/Road/Utility Corridor (12 km x 125 m wide) is also proposed from Northern side of Dhamra Port.
		Fishermen and fishing villages	- Local Fishermen approach to sea. - Fishing harbour is located in Dhamra River at 6.5 km southwest boundary of the port. The fishing boats travels all through the Dhamra River and enter into sea. The approach channel of the port is oriented from south to north east whereas fishing boats travels from south to east. Fishing is being carried out at deep sea. Therefore, significant impact on fishing is not envisaged.	- Dhamra Port is an existing port, fishermen in the area are well aware of the existing port activities. Therefore, no direct impact is envisaged. - Creation of awareness among the fishermen about proposed master plan activities is being done and will be continued. - Marker buoys along the channel. - Educate the fishermen about the orientation of approach channel and ships visits etc., - Regular interactions will be initiated with the fishing community.	Noted

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				- Conflicts, if any, with fishing community will be amicably resolved in all cases.	
2	Aqueous discharges in harbour basin	Marine water quality and ecology	- Change in marine water quality/ecology due to discharge ship wastes (sullage), sewage, bilge water, Desalination Plant reject water, LNG/LPG regasification return water etc.	- Vessels/Ships will be required to exchange ballast water in a deep sea location prior to arrival in the harbour. - Ships are prohibited from discharging Waste water, bilge, oil wastes, etc. into the near shore as well as harbour waters. - Ships would also comply with the MARPOL - regulation. - As a mitigation measure for spillages an Oil spill contingency plan prepared and will be - implemented. - Provision of waste reception facility for bilge water and waste oil will be explored - Desalination Plant water requirement selected prudently and will be sourced from river Matai which will ensure the reject TDS will be always less than the seawater TDS and hence no significant impact due to reject discharge into marine environment. - LNG/LPG regasification return water with low temperature (<70C than ambient) will be sent back through marine outfall system with diffusers at identified location through mathematical model studies which will	Noted

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				ensures attainment of ambient conditions (within 600 m) in the harbour area. - Marine Water Quality monitoring is proposed as Part of Environmental Monitoring programme.	
3	Cargo and Oil Spills (Accidental)	Marine water quality and ecology	- Change in marine water quality	- In case of any cargo spillage during transfer from/to ships, it will be attempted to recover the spills. - Oil spill control equipment such as booms /barriers will be provided for containment and skimmers will be provided for recovery. - Response time for shutting down the fueling, containment and recovery will be quicker.	Noted
4	Maintenance dredging	Marine water quality/Marine Ecology	- Increase in turbidity - Decrease in DO levels	- It will be ensured that dumping of the - maintenance dredge material would be uniform at the identified offshore disposal ground. - Dredge spoil disposal studies reveals that the changes in bed level at disposal site due to deposition of dredge spoil is less than 0.011 m. The spread of plume is also ensured that it will never reach the channel, shoreline and other eco sensitive areas. - Pre and post dredge material disposal - bathymetry survey at disposal location shall be carried out. - Based on the TSS/Turbidity monitoring results during dredging, nearby receptors if any impacted would be provided with suitable mitigations	Noted

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				measures such as silt screen to contain the turbidity.	
5	Water Supply	Water resources	- Impact on existing water resources	- Raw water shall be taken from Matai River - (Perennial) at the existing intake location. The maximum water withdrawal shall be 100 MLD(for 40 MLD desalination plant). - No downstream users are observed beyond the Intake Point at River Matai. - Government of Odisha has accorded permission for water intake of 5 MLD from Matai River and necessary permission will be obtained from the concerned authorities for revised Master plan requirements.	
6	Wastewater Discharge	Water Quality	- Impact due to discharge of runoff from stock piles and disposal of untreated sewage. - Impact due to discharge of brine (reject from Desalination plant) runoff from stock piles. - And disposal of untreated sewage.	- Collection of runoff from stock piles and directing into settling ponds for recycling and supernatant water will be used for dust suppression. - Neutralisation using lime to ensure settlement of heavy metals, if any. - STP (1 MLD capacity during 5 year and 2 MLD (Cumulative) capacity during 30 year - development) to treat the sewage generated in the premises. - ETP (3 MLD capacity during 5 year and 5 MLD (Cumulative) capacity during 30 year - development) to treat the effluents. - Storm Water Drainage System	Noted

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				- Treated Sewage and effluents shall be reused for dust suppression, irrigating greenbelt and other requirements.	
7	Seawater withdrawal for Regasification and water withdrawal from River matai for desalination plant	Marine ecology/ River Ecology	- Impingement/Entrainment/ Entrapment of aquatic life	- Intake with proper screens will be Provided - Maintaining Low Intake Velocity to minimise the Entrainment & impingement. - Seawater Intake is proposed in protected - harbour basin which will reduce major marine organism entry. - Intake is proposed nearer to LNG Terminal and hence entrapment will be insignificant.	Noted
8	Solid Waste Management	Groundwater and Soil quality	- Impact due to disposal of solid waste on ground	- 5 R (Reduce /Reuse/Recover/Recycle and Re Process) principle shall be explored - STP sludge will be used as manure in green belt. - Organic Waste Convertor will be provided. - Composted bio-degradable waste will be used as manure in greenbelt/ gardens. - Other recyclable wastes will be sold to OSPCB authorised vendors. - Commercial use will be explored for the - materials settled in dump pond.	Noted DPCL has developed a vision for making itself – "A Zero Waste to Landfill Port" by adoption of 5R principle of waste management i.e Reduce, Reuse, Reprocess, Recycle & Recover. During the period Apr'20 to Sep'20, a total quantity of 65.526 MT of solid waste has been handled in line to 5R concept. We have color coded bins for segregating different category of solid waste. Biodegradable wastes are used for compost preparation. Recyclable wastes are handed over to authorized recyclers.

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
	Handling of hazardous materials/ wastes	Fire accidents due to products handling and other health hazards/ Groundwater and soil contamination	- Human life and loss of property. - Impact on Terrestrial and Marine Environment	- Hazardous and other waste Management Rules, 2016 (as amended) will be followed for environmental sound management of hazardous waste. - Adequate safety measures as per OSHA standards will be adopted. - Hazardous materials such as lubricants, paints, compressed gases, and varnishes etc., will be stored as per the prescribed/approved safety norms. - Medical facilities including first aid will be made available for attending to injured workers. - Handling and storage as per statutory guidelines. - Positive isolation procedures will be adhered. - Hazardous wastes will be disposed through - approved OSPCB/CPCB vendors or shall be - given to nearby approved cement industry for coprocessing. - Risk analysis has been carried out and - suggested risk mitigation measures shall be - adopted. - Emergency alarms, provision of fire hydrant - system and fire station. - Effective Disaster Management Plan (DMP)	Complied. We have a strict safety regimen with the motto "Safety First". Safety Observations are mandatory from every department of the port and immediate measures are undertaken to rectify the shortcoming. OHSAS Guidelines and MSIHC Guidelines are followed for handling of Hazardous materials. First aid center facilities have been provided for employees and workers. Inline to this a wellness center is also operated outside the port premises for providing medical facilities for villagers.

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				- which covers onsite and offsite emergency plans. - Recovery of spills to the maximum extent - possible.	
	Presence of Reclaimed back up area or Bund	Shoreline Changes Change in Hydrodynamics	- The shoreline modelling studies shows that mostly accretion in the stretches studies and erosion in north of revised master pan area at the rates of -4.38m/ year and erosion below the Dhamra river region at the rate of -2.71 m/ year. Suitable mitigation measures will be carried out to maintain the stability of coast. - Flow modelling shows that Variation in the flow regime (in the current speeds) after the expansion is limited to the development location mostly and found to be very much local in nature. No change in the flow regime of the rest of the domain is observed.	- Monitoring of shoreline with the help of high resolution satellite imageries during operation phase shall be carried out periodically. - Based on the monitoring results and if required, appropriate remedial measures such as beach nourishment/ creation of sand trap/ any other suitable methods shall be carried out to maintain the stability of coast.	Noted. Shoreline monitoring study was carried out as a part of Environment Impact Assessment study for Revised Master plan and further, the same will be carried out at regular intervals to check the impact and if required mitigation measures will be carried out.
11	Operation of Port	Socio-economic conditions of the region	During operational phase the expected direct and indirect employment will be 2200 persons and 11000 persons during 5 year development and 4000 persons and 20000 persons during 30 year development respectively. Local people will be given preference based on their qualification and skill set. Together with this employment potential, project will help to enhance the socio economic conditions of the area with better schooling, communication		Noted

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
			and transport facilities that will be developed/ triggered as a part of overall economic development of the region.		
		Natural Hazards	Disaster Management Plan (DMP) is already in place and will be continued after expansion also with required revisions. Port Conservator will act as the overall in-charge of the control of educative, protective and rehabilitation activities to ensure least damage to life and property.		Noted & will be complied. At present no hazardous or petroleum products are being handled at shore and details RA recommendation will be complied as and when applicable, However, as a part of present operation following measures are being adopted. Disaster Management Plan was prepared was approved from District Administration. Periodic mock drills are also being carried out. Safety is being followed as per the prescribed guideline. Dedicated team lead by dedicated site safety team along with team at Corporate is ensuring best safety practices at Port premises.
		Induced Development	Offers an efficient and cost effective supply chain/value proposition to the local importers and exporters in the states of Odisha, Chhattisgarh and Jharkhand. Also serves as an alternative gateway to ports on the east coast of India for trade between north east India and Asia.		Noted & will be complied.

ANNEXURE-V

Environment Expenditure

Oct'20 to Mar'21

Sl.No	Activity/Category	Expenditure (in Lakhs)
01	Environmental Study, Audit and Consultancy	7.29
02	Adopt an Animal at Nandankanan Zoo	2.65
03	Environmental Monitoring Services	15.51
04	Hazardous Waste Management & Disposal	50.52
05	Treatment and Disposal of Bio-Medical Waste	1.87
06	Horticulture / Plantation	1.90
07	O&M of Sewage Treatment Plant (STP)	8.34
08	O & M of Water Treatment Plant (WTP)	43.73
09	Support to Forest department for Olive Ridley Turtle Conservation	15.84
10	Port housekeeping (Environment)	8.24
11	Port housekeeping (Operation)	519.54
12	Mechanized Sweeping Machine	51.20
13	O & M of OWC machine	4.08
14	Housekeeping (Admin)	264.43
15	Housekeeping (Railway)	6.35
16	Housekeeping (Store)	6.01
17	Firefighting Expenses	56.84
18	Housekeeping (ES)	95.12
19	O & M of Dust Buster	6.68
	Total	**1166.14**

ANNEXURE-VI

THE DHAMRA PORT COMPANY LIMITED

ADANI FOUNDATION - CSR WORK DETAILS
Oct'20 to Mar'21

	EDUCATION	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Total (Oct'20 - Mar'21)
1	**Merit Scholarship:** The students from eight core GPs, scoring 75% & above marks in their class 10th examination under the Board of Secondary Education Odisha.	5.06	0.00	0.00	0.00	0.00	0.00	**5.06**
2	LEAP project - ThinkZone	0.00	0.00	0.00	7.04	7.04	0.00	**14.08**
3	**Support to Quality Education** (Setting up School Library in High Schools and ME schools) **Programme :**	0.00	0.00	0.00	4.00	0.00	5.83	**9.83**
4	**GURU SAMMAN-** Felitication of retired teachers who have immensely contributed towards the Education upliftemnt of Bhadrak & dhamra region.	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
5	**Support to School** (in bridging the gap of basic facilities in schools) **Programme :**	0.00	4.52	1.85	9.80	3.25	10.61	**30.03**
6	Learning Enrichment program forTeachers	0.00	0.00	0.00	0.00	1.35	0.00	**1.35**
7	Swachhagraha (To bring about a culture of cleanliness among children and community people)	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
8	**Self Defense Training** to School Girls	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
9	**Adani DAV Public School,** Kuamara.	25.80	52.07	49.09	29.01	20.65	31.57	**202.19**
10	**Udaan** - Young & adolescent Students get to visit the Adani Dhamra Port for a knowledge based experience about the Port and the activities of Adani Foundation	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
		30.86	*56.59*	*50.94*	*43.85*	*32.29*	*48.01*	*262.54*
	COMMUNITY HEALTH							
1	**Wellness Centre-** Medicines for free distribution to community at the health centre.	4.99	4.99	4.99	4.99	4.99	4.99	**29.91**
2	**MHCU Service** - 2 Mobile Health Care Units are catetring door step helath service to the villages in and around 03 blocks of Bhadrak District i.e. Chandbali, Tihidi & Bhadrak	4.16	4.16	4.16	4.16	4.16	4.16	**24.95**
3	**Mega Health Camp** - 04 Mega Health Check Up Camps will be organised focusing on the prevalent diseases from the community	0.00	0.00	0.00	0.00	0.00	5.25	**5.25**
4	Eye Screening Camp in School	0.00	0.00	0.00	0.00	0.00	5.00	**5.00**
5	Special Day and Month Observation (Virtual) and addressing the Need of COVID - 19	0.00	0.00	0.00	0.00	1.23	6.56	**7.79**
6	SuPoshan Project - In curbing Malnourishment and control the number of Severe Accute Malnourishment (SAM) & Moderate Accute Malnourishment among 0-5 years of children and develop the Health status of Pregnant and Lactating mothers	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
		9.14	*9.14*	*9.14*	*9.14*	*10.37*	*25.95*	*72.99*
	SUSTAINABLE LIVELIHOOD							
1	Support to Women SHG	0.00	0.52	0.00	0.00	0.00	3.85	**4.37**
2	Farmers' group initiative	2.41	3.84	1.95	2.12	12.36	4.37	**27.05**
3	Livestock Care	0.00	2.15	2.15	2.02	6.14	7.05	**19.51**
4	Disaster Mitigation-Response to COVID – 19 and Amphan	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
5	Promoting Rural Sports	0.00	0.00	0.00	0.00	2.47	3.67	**6.14**
6	Aahar	2.58	2.58	2.58	2.58	2.58	2.58	**15.48**
	Stakeholder Management	0.00	0.00	6.92	0.63	0.92	0.50	**8.97**
		4.99	*9.09*	*13.60*	*7.35*	*24.47*	*22.02*	*81.52*
	RURAL INFRASTRUCTURE DEVELOPMENT							
1	**Village Development Related:** Road Infra Support	0.00	0.00	30.00	30.00	31.02	0.00	**91.02**
2	**Drinking Water Facility-**Handpump (31)	0.00	0.00	21.60	10.70	1.74	2.21	**36.25**
3	**Village Development Related:** Swach Dhamra Mission-Two Community Toilet	0.00	0.00	0.00	0.00	0.00	5.67	**5.67**
4	**Education related:** Infrastructure Development for Education	0.00	0.00	0.00	37.15	0.00	0.00	**37.15**
5	**Stadium Work Support:** Mini Stadium at Chandbali	0.00	0.00	0.00	0.00	0.00	4.13	**4.13**
6	Pond Excavation	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
7	**Village Development Related:** High Mast Light Support	0.00	0.00	0.00	0.00	0.00	12.59	**12.59**
7	**Library Support** (Library Infrastructure Supportat Basudevpur)	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
8	Engagement with Different Stakeholders. (SLD) - Rennovation of Community POND.	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
TOTAL		*0.00*	*0.00*	*51.60*	*77.85*	*32.76*	*24.60*	***186.81***

ANNEXURE-VII

Dhamra Port Company Limited					
OIL SPILL MANAGEMENT					
	DESCRIPTION		DHAMRA		REMARKS
			VIKOMA	DESMI	
EQUIPMENT	Inflatable Boom (meters)		300	1750	VIKOMA, Sentinel 1100 Boom + DESMI
	Skimmer (20 TPH)		1	3	VIKOMA, KOMARA-20, 5-bar + DESMI
	OSD Applicator (no.)		10	2	
	Oil Spill Dispersant (litres)		15750		
	10 Tons flex Barge (no.)		-	4	
	Sorbent boom (meters)		-	500	
	Sorbent Pad (no.)		-	2000	
	Shoreline cleanup Equipment	Mini Vaccum pumps	-	5	
		OSD Applicator	-	5	
		Fast Tanks	-	5	
VESSELS	Work Boats		2		
	Tugs		5		2 tugs are equipmed with equipment
MANPOWER	IMO Level 1		14		
	IMO Level 2		4		
	Other		-		

ANNEXURE-VIII

Plantation / Greenbelt Inside Port

Roadside Plantation (Inside Port)

Roadside Plantation (Inside Port)

Plantation Inside Port

Plantation inside Port

Plantation / Greenbelt Inside Port

Plantation Inside Port Area

Plantation Inside Port Area

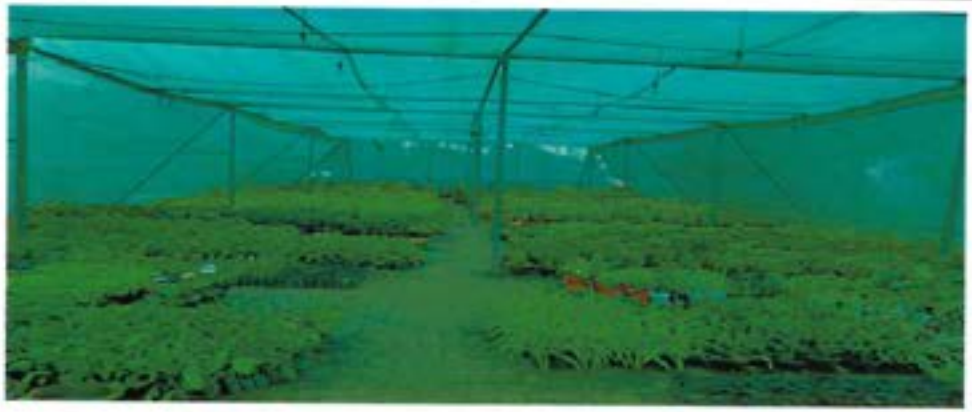
Plantation Inside Port Area

Plantation Inside Port Area

Plantation / Greenbelt - Nursery

Nursery at Dhamra Port

Nursery at Dhamra Port



Nursery at Dhamra Port

Nursery at Dhamra Port

Plantation / Greenbelt – Degraded Forest Patch

Plantation in degraded Forest Patch (North side)

Plantation in degraded Forest Patch (North side)

Plantation in degraded Forest Patch (Nr. Amarnagar)

Plantation in degraded Forest Patch (Nr. Amarnagar)

South Side Mangrove Plantation and Conservation

Conservation & Protection of 9 Ha Mangrove Patch

Conservation & Protection of 9 Ha Mangrove Patch

Conservation & Protection of 9 Ha Mangrove Patch

Conservation & Protection of 9 Ha Mangrove Patch

ANNEXURE-IX

The Dhamra Port Company Limited		
Fire Extinguisher Details		
Sl. No.	Locations	Type of Extinguishers & Quantity
1	SWITCH YARD	DCP-5KG-4nos
2	MCC -1	(CO2-4.5KG)-5nos (CO2 -3KG)-1no, (FOAM-50ltrs)-01no
3	MCC-1(A)	(CO2-4.5KG)-3Nos(DCP-6KG)-2KG
4	MCC -2	(CO2-4.5KG)-2nos
5	MCC -2(A)	(CO2-4.5KG)-1no (CO2 -3KG)-1no
6	Mantei Office (Security)	CO2-4.5kg-02 Nos, DCP-6kg-04 Nos, DCP25kg-01 No.
7	MCC -4	(CO2-4.5KG)-02nos.(DCP- 5KG)-1no
8	TP - 1(A)	CO2-4.5KG-1no
9	TP - 1(B)	CO2-4.5KG-1no
10	TP - 2	CO2-4.5KG-1no
11	TP - 2(A)	CO2-4.5KG-1no
12	TP - 3	CO2-4.5KG-1no
13	TP - 3(A)	CO2-4.5KG-1no
14	NEW TP-3	CO2 -4.5KG-1no
15	TP - 4	CO2 -4.5KG-1no
16	TP - 4 (A)	CO2 -4.5KG-1no
17	TP - 5	CO2 -4.5KG-1no
18	TP - 6	CO2 -4.5KG-1no
19	TP-7	CO2 -4.5KG-1no
20	TP-8	CO2 -4.5KG-1no
21	TP-9	CO2 -4.5KG-1no (DCP- 5KG)-1no.
22	TP-10	CO2 -4.5KG-1no
23	TP-10(A)	CO2 -4.5KG-1no
24	TP-11	CO2 -4.5KG-1no
25	TP-11(A)	CO2 -4.5KG-1no
26	TP - 12	CO2 -4.5KG-1no
27	TP – 12(A)	CO2 -4.5KG-1no
28	TP - 14	CO2 -4.5KG-1no
29	TP - 15	CO2 -4.5KG-1no
30	TP – 15(A)	CO2 -4.5KG-1no
31	TP - 16	CO2 -4.5KG-1no
32	TP - 17	CO2 -4.5KG-1no
33	TP - 19	CO2 -4.5KG-1no
34	TP - 21	CO2 -4.5KG-1no
35	TP - 21	CO2 -4.5KG-1no
36	JETTY	CO2 -4.5KG-2nos DCP-5KG-5nos
37	SL	CO2 -4.5KG-4nos DCP-5KG-1no
38	SUL-1	CO2 -4.5KG-5nos (CO2 -3KG)-1nos (DCP- 5KG)-2nos
39	SUL-2	CO2 -4.5KG-5nos (CO2 -3KG)-1nos (DCP- 5KG)-2nos
40	SUL-3	CO2 -4.5KG-6nos (DCP-2KG)-2nos (DCP- 5KG)-1no
41	SUL-4	CO2 -4.5KG-6nos (DCP- 5KG)-3nos

42	SUL-5	CO2 -4.5KG-6nos (DCP- 5KG)-3nos
43	LIEBHERR-11	CO2 -4.5KG-2no, DCP-5KG-2nos, DCP-2KG-2nos
44	LIEBHERR-12	CO2 -4.5KG-2no, DCP-5KG-4nos
45	LIEBHERR-06	(CO2 -4.5KG)-2no, (CO2 -3KG)-1no, DCP-5KG-1no
46	LIEBHERR-07	CO2 -4.5KG)-3no, DCP-2KG-1no
47	SILO - 1	CO2 -4.5KG-3nos DCP-5KG-1no
48	SILO - 2	CO2 -4.5KG-3nos DCP-5KG-1no
49	SILO - 3	CO2 -4.5KG-2nos DCP-5KG-1no
50	SILO - 4	CO2 -4.5KG-3nos DCP-5KG-1no
51	FIRE PUMP HOUSE	CO2 -4.5KG-2nos
52	WTC -1	CO2 -4.5KG-2nos. DCP-5KG-2Nos
53	WTC -2	CO2 -4.5KG-2nos DCP-5KG-2nos CO2 -3KG-1no
54	SR -1	CO2 -4.5KG-2nos DCP-5KG-1no
55	R - 1	CO2 -4.5KG-2nos DCP-5KG-1no
56	SR -2	CO2 -4.5KG-2nos DCP-5KG-1no
57	SR -3	CO2 -4.5KG-2nos DCP-5KG-1no
58	SR -4	CO2 -4.5KG-1no CO2 -3KG-1no, DCP-5KG-1no
59	SR-5	CO2 -4.5KG-2nos DCP-5KG-1no
60	SR-6	CO2 -4.5KG-2nos DCP-5KG-1no
61	Fire & Security Barrack	CO2-4.5KG-3nos, DCP-5KG-2no
62	JETTY CONTAINER	CO2-4.5KG-1no, DCP-5KG-1no
63	MHS OFFICE	CO2-4.5KG-2 Nos.
64	PSS	CO2 -4.5KG-3nos, DCP-5kg-01No.
65	BMH WORK SHOP	CO2 -4.5KG-3nos DCP-5KG-3nos FOAM-50ltrs-01n
66	All Equipment	DCP-5KG-08nos.
67	LOCO SHED	CO2 -4.5KG-02nos, DCP-5KG-2Nos.
68	DIESEL FILLING STATION	Foam-9ltr-1no
69	IOCL	Foam-9ltr-1no , Foam 5oltr-01 No.
70	WTP	CO2 -4.5KG-4nos
71	ADANI HEALTH CENTER	CO2-4.5kg-05 Nos, DCP5kg-03 Nos.
72	REWA OFFICE	CO2-4.5KG-3Nos DCP-5KG-1No
74	CUSTOMS OFFICE	CO2-4.5KG-1No DCP-5KG-1No
75	DPCL STORE	CO2 -4.5KG-1no DCP-5KG-1No
76	Lubricant Store	Foam-9ltr-1no, DCP-5KG-1No.
77	SS-01	CO2 -4.5KG-1no
78	SS-02	CO2 -4.5KG-1no
79	SS-03	CO2 -4.5KG-1no
80	SS-04	CO2 -4.5KG-1no
81	SS-05	CO2 -4.5KG-3nos
82	NEW CANTEEN (Adani port canteen)	CO2 -4.5KG-03no DCP-5KG-1no
83	DHAMRA HOUSE	DCP-6KG-7nos, DCP-2KG-1nos CO2 4.5KG-01no
84	KANIKA GUEST HOUSE	CO2 -4.5KG-01no DCP-5KG-1no
85	DAV SCHOOL, KUAMARA	CO2 -4.5KG-16nos DCP-5KG-15nos
86	TOWNSHIP	CO2 -4.5KG-11nos
87	New Township	CO2 -4.5KG-04nos, DCP-6KG-4nos
89	COMMUNITY HALL	CO2 -4.5KG-1nos DCP-5KG-2nos

90	PREFAB	CO2 -4.5KG-4nos DCP-5KG-5nos
91	DHAMRA GUEST HOUSE (Kalibhanja Guest House)	CO2 -4.5KG-4Nos.
92	RAILWAY OFFICE	CO2 -4.5KG-02noS DCP-5KG-3nos
93		
94	BHATATIRA STATION	CO2(4.5kg)-2Nos DCP-5KG-1no
95	BHATATIRA LC-5	DCP-5KG-1no
96	BHATATIRA- SP	CO24.5kg-1No
97	GURUDASPUR STATION	CO2-4.5KG-1No DCP-5KG-1No
98	GURUDAS PUR TSS	CO2 -4.5KG-1no DCP-5KG-4Nos.
99	GURUDAS PUR SUB STATION	DCP-5KG-2Nos
100	INTAKE	CO2 -4.5KG-3nos DCP-5KG-1no
101	RANITAL	CO2 -4.5KG-1no
102	GURUDAS PUR LC-19	DCP-5KG-1no
103	IMWB	CO2-4.5KG-1 No.
104	LOCO TRANSFORMER	CO2-4.5KG-2nos, DCP-5KG-1no
105	HEALTH CENTRE	CO2-4.5KG-1no, DCP-5KG-1 No.
106	TOWER WAGON	DCP-5KG-3nos
107	TIHIDI STATION	CO2 -4.5KG-1no DCP-5KG-1no
108	BANSADA STATION	CO2 -4.5KG-3nos
109	LC-26,NEAR DI ROAD	CO2 -4.5KG-1no
110	KOCHILA OFFICE	C02-4.5KG-2Nos DCP-5KG-2nos
111	BRAMHANI OFFICE	CO2 -4.5KG-1no DCP-5KG-1no
112	KANIKA TRANSFORMER	CO2 -4.5KG-1no, DCP5KG-1NO.
117	SECURITY CONTAINER, NEAR MAIN GATE	CO2 -4.5KG-1no DCP-5KG-1no
118	FIRST AID CENTER	CO2 -4.5KG-1no DCP-5KG-1no
119	DPCL AMBULANCE(OLD)	DCP-5KG-1no.
120	DPCL AMBULANCE(NEW)	DCP-5KG-1no.
121	RAILWAY GSS	CO2 -4.5KG-1no DCP-5KG-1no
122	RUNNING ROOM	CO2 -4.5KG-1no DCP-5KG-1no
123	SAFETY INDUCTION HALL	CO2 -4.5KG-1no
124	FCC GODOWN	CO2 -4.5KG-19nos DCP-5KG-03nos Foam-9ltr-3nos, Foam 50 ltr.-1 No.
125	FCC OFFICE	CO2 -4.5KG-1no DCP-5KG-1no
126	FCC CANTEEN	DCP-5KG-1no
127	WAISTAGE OIL STORE	Foam-9ltr-1no,CO2 4.5KG-01NO
128	LABOUR REST HOUSE	CO2 -4.5KG-1no
129	SS-6	CO2 -4.5KG-16nos DCP-5KG-10nos, Foam-50ltr-1no
130	COLONY PUMP HOUSE	CO2 -4.5KG-1no
131	BHADRAK GUEST HOUSE	CO2 -4.5KG-1no DCP-5KG-1no
132	BBSR OFFICE	CO2 -4.5KG-3nos DCP-5KG-4nos
133	BBSR GUEST HOUSE	CO2 -4.5KG-1no DCP-5KG-1no.
134	ADANI RAILWAY ENGINE	CO2 4.5KG-1, DCP-5KG-01 NO.
135	WASTE SHED	DCP5KG-1 NO, FOAM9LTR-1 NO.
136	FCC TRANSFERMER	DCP5KG-01 NO,CO2 4.5KG-01 NO

137	FCC LABOUR COLONY	CO2-4.5KG-01 NO, DCP5KG-02NOS.
138	SS-7	CO2 -4.5KG-9nos
139	SS-8	CO2 -4.5KG-9nos, DCP-5KG-02Nos
140	SS-9	CO2 -4.5KG-16nos, DCP-5KG-06Nos
141	TP-7(A)	CO2 -4.5KG-1no
142	TP-8(A)	CO2 -4.5KG-1no
143	TP-1(C)	CO2 -4.5KG-1no
144	TP-2(C)	CO2 -4.5KG-1no
145	TP-3(C)	CO2 -4.5KG-1no
146	North Gate	CO2 -4.5KG-3nos, DCP-5KG-01No
147	Mobile Equipment Office(near BMH workshop)	CO2 -4.5KG-1no
148	DPCL Central Store	Foam 50ltr-01 No, DCP5kg-01 No.
149	Fire pump house (Near track hopper)	CO24.5kg-01 No, DCP5kg-01 No.
150	FCC Workshop	CO24.5kg-02 Nos, DCP5kg-02 Nos.
151	Township Shopping Mall	DCP5kg-03 Nos, CO2-4.5kg-01 no.
Total Fire Extinguisher Installed at site		**CO2-4.5kg=320Nos, CO2-3kg =09nos, DCP-6/5kg=183nos, DCP-2kg=04nos DCP 25kg-02nos & Foam-9ltrs=05nos, Foam -50ltrs -06nos**
Stock Balance Fire Tender With Fire Store & DPCL Store **Total Numbers fire Extinguisher**		**CO2 (4.5kg)- 39nos, CO2 (3kg) -6nos DCP (ABC)-6kg-42nos, DCP (ABC)-2kg-11nos, DCP 25kg-08nos, Foam(9ltrs)-04nos, Foam(45ltrs)-02nos & Foam (50ltrs)-04nos. DCP Extinguisher- 250 Nos. CO2 Extinguisher- 378 Nos. Foam Extinguisher- 23 Nos.**

SL.No.	Description of mock drills and training	Numbers of training & mock drill conducted	Numbers of participants
1	Emergency Rescue mock drill	07	175
2	Safety Induction Training	149	1951
3	Portable fire Extinguishers training	37	482
4	Defensive driving training	7	159
5	Tool box training	33050	332738
6	On the Job Safety Awareness	2931	52702

Fire Crews member:-

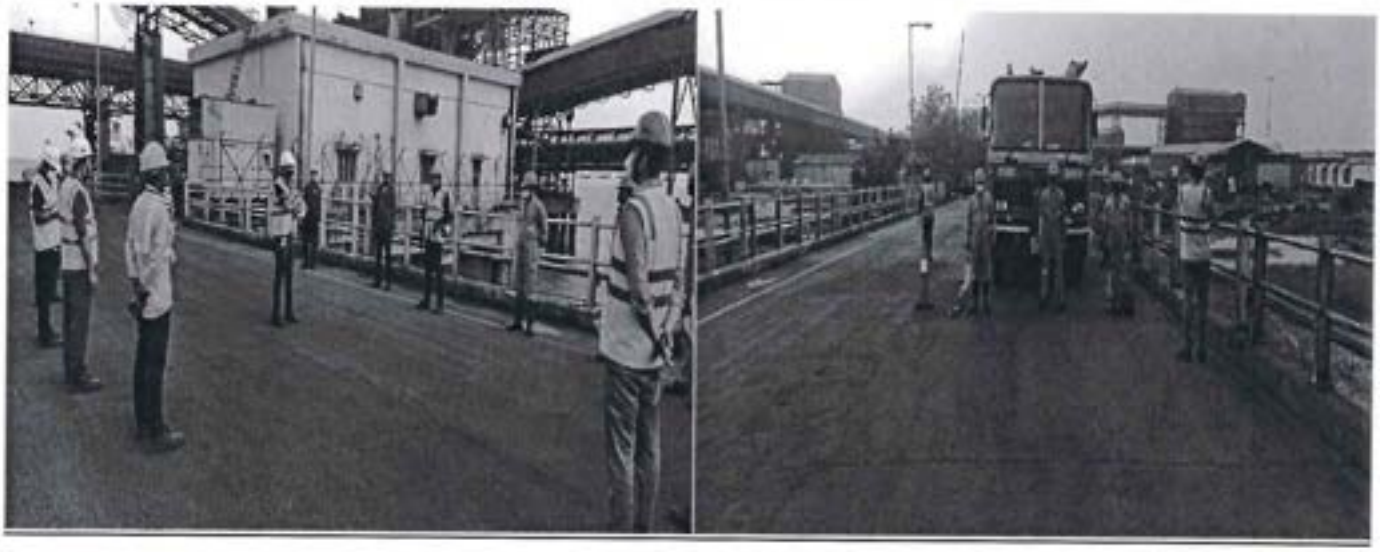
Sl No	Position	Total
01	Fire Officer	01
02	Sub Fire Officer	01
03	Fire Supervisor	01
04	Safety Co ordinator	01
05	Fire tender Operator	07
06	Leading fireman	07
07	Fire man	23
		Total Fire Crews- 41

Fire Tender Details:-

Sl No	Fire Tenders	Water tank Capacity	Foam tank Capacity
01	OR22D8144	4500 ltr	500 ltr
02	OR22D8145	4500 ltr	500 ltr

FIRE EXTINGUISHER TRAINING

EMERGENCY RESCUE MOCK DRILL AT SITE



ANNEXURE-X

Worker Colony

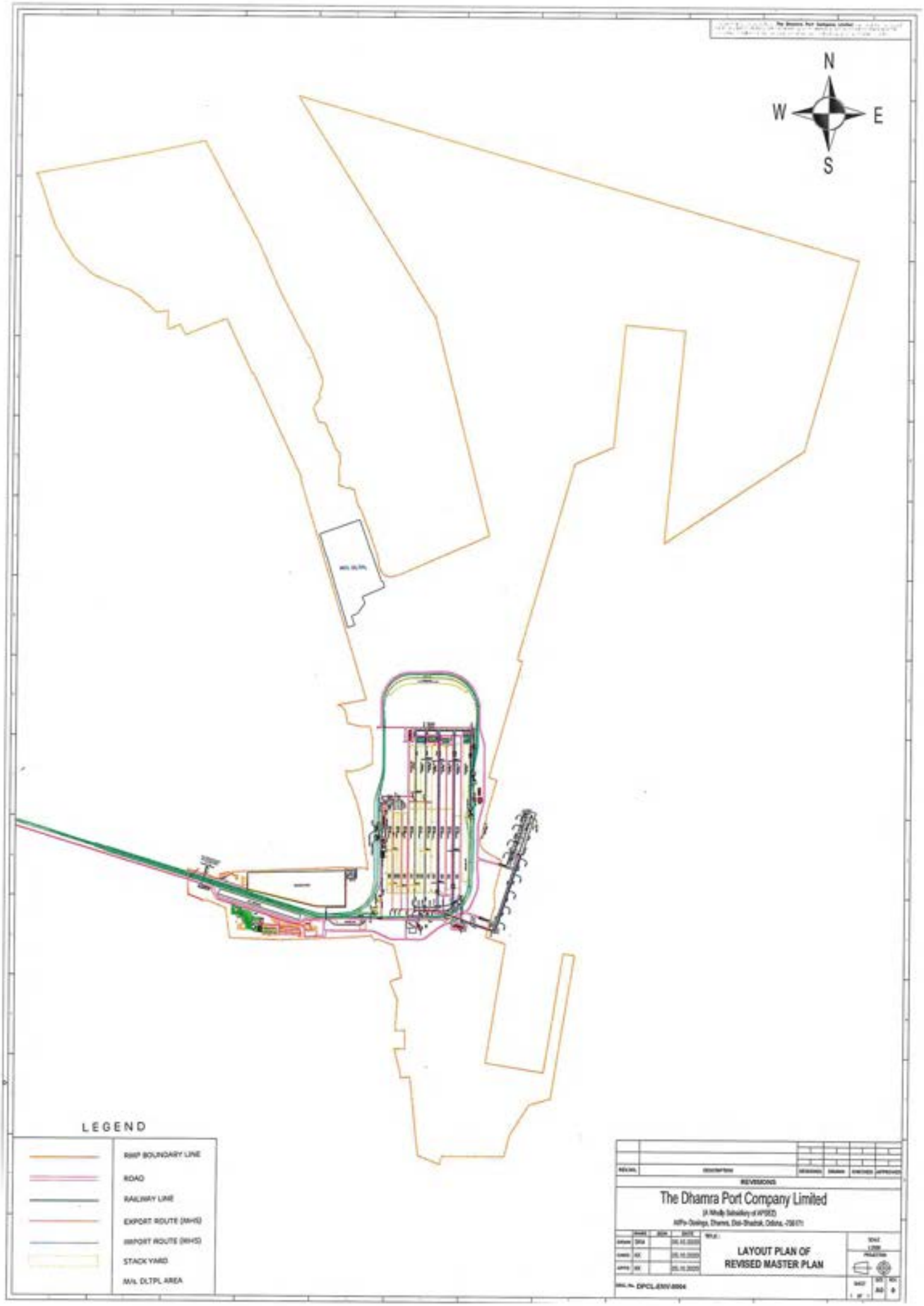
Worker Colony

Kitchen

Volleyball Court

Bathroom & Toilet complex

ANNEXURE-XI


N
W
E
S
LEGEND
RWP BOUNDARY LINE
ROAD
RAILWAY LINE
EXPORT ROUTE (MHS)
IMPORT ROUTE (MHS)
STACK YARD
M/s. DLTPL AREA
REVISIONS
The Dhamra Port Company Limited
LAYOUT PLAN OF
REVISED MASTER PLAN
DPCL-ENV-0004