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Ports and Logistics

DPCL/ENV/MOEFCC/2022-121 29.11.2022

To

The Deputy Director General of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office,
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 at Dhamra, Bhadrak, Odisha for the period Apr'22 to Sep'22

Ref. : Environment & CRZ clearance for Revised Master Plan Development at Dhamra Port dated 15th November 2010 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 Apr'22 to Sep'22 in soft copy for your kind reference. The said period compliance report is also being e-mailed on roez.bsr-mef@nic.in.

Thanking you,
Yours Sincerely,

Santosh Kumar Nayak
HOD - 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, Paryavas Bhawan, A/118, Unit 8, Nilakanthe Nagar, Nayapalli, Bhubaneswar-751012
4) The Regional Officer, State Pollution Control Board, Odisha, Plot no. 1602, Ganeshwarpur, Janiagoni, 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 Ltd
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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**
A. Specific Conditions:		
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.	All the recommendations and conditions 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 has been obtained from State Pollution Control Board, Odisha vide letter no. 1874 IND-II-CTE-6289 dated: 17.02.2020. Consent to Operate has been obtained from State Pollution Control Board, Odisha vide letter no. 4218-IND-I-CON-6348 dated: 24.04.2020 and is valid till 31.03.2025.
IV	The project proponent shall comply with the air pollution mitigation measures as submitted.	Complied. As a part of existing operation, following air pollution control and mitigation measures are being adopted. • Use of dust suppression system in hopper, conveyor belt and transfer points. • Pre wetting of cargo before tippling in wagon tippler. • Wagon cargo loading by closed silo system. • Covering of outgoing loaded rail wagon at “Wagon covering station”. • Regular water sprinkling by tankers. • Rain guns are fixed all around the stack yard for suppression of dust during stacking, reclaiming and during high wind period. • 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 • Tarpaulin covering of minerals stored in stack yard. • Use of water mist canon for suppression of fugitive dust emission. • Road cleaning by mechanized and manual means are being carried out on regular basis. • Use of leak proof transporting vehicles for intra transportation of materials. • Limiting the vehicle speed to 20 km/hr to control the fugitive dust emission.

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.		
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		• Maximum mechanized handling (Loading and unloading) of cargo from ship. • Greenbelt development along the periphery of storage yard /stack yard. • Regular monitoring of Ambient Air Quality at 6 locations and DG stack monitoring at 6 locations are being carried out by NABL accredited laboratory following the prescribed guidelines. All the results were within the prescribed limit (**Annexure-III**). • Periodic awareness and training programmes are being conducted regularly among employees and workers.
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.	Complied. Drainage pattern as approved under RMP will be maintained. As a part of existing operation drainage pattern is being 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 followed.
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 MOEF&CC approved laboratory. The details of marine water quality monitoring reports for the period from Apr'22 to Sep'22 is enclosed as **Annexure I.**
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 Apr'22 to Sep'22, total maintenance dredging was 7.01 MCM. Capital dredging is 1.7 MCM which was used for reclamation during Apr'22 to Sep'22. As stipulated in EIA report and discussed in the EAC, dredged materials are disposed inside sea at MOEF&CC approved designated location with (-) 20 m depth. The marine water quality monitoring is being carried out by NABL & MOEF&CC 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	Noted.

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S. No.	**Conditions**	**Compliance Status**
	conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring report	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. However, regular monitoring activities is being carried out by a NABL & MoEF &CC accredited lab.
XII	The freshwater 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 will be developed when required. Existing operational requirements are being fulfilled through Mantai river. Permission for drawal 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	Complied. As a part of existing operation, four STP of capacity 150 KLD, 140 KLD, 25 KLD and 15 KLD are functioning for treatment of sewage from Port and township area. 3 nos. of Settling ponds have been constructed for treatment of runoff water. The treated water is being used for dust suppression of internal roads. Periodic testing of water quality is being done by MOEF&CC approved laboratory and the results are being submitted to SPCB/MOEF&CC. All results are well within the prescribed standards. The treated water is being used for horticulture purpose.
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.	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 & MoEF&CC accredited laboratory. The monitoring results for the period Apr'22 to Sep'22 is enclosed as **Annexure - I.**
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 submission to the State Biodiversity Board for validation.
XVI	A periodic monitoring programme covering all the seasons on various aspects of the coastal environments need to be undertaken by NABL accredited laboratories during construction and operation phase of the project. The monitoring	Complied. As a part of existing operations, periodic monitoring program covering all seasons on various aspects of the coastal environments is carried out by NABL & MoEF&CC accredited laboratory.

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**
	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.	The monitoring results for the period Apr'22 to Sep'22 is enclosed as **Annexure - I.**
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 being 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 will not reach the surrounding areas. Sprinklers shall be used at coal storage regularly and to monitor the coal dust in the air	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 • 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. • 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.	Complied. As a part of existing operation fortnightly monitoring of sediment quality is done through MOEF&CC 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	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 & MoEF&CC accredited laboratory. The monitoring results for the period Apr'22 to Sep'22 is enclosed as **Annexure - I.**
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	Noted. Utmost care is being taken to avoid spillage of fuel/engine oil and lubricants from the construction

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S. No.	**Conditions**	**Compliance Status**
	shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.	site. In case of any accidental spillage, saw dust or sand will be 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 As a part of existing operation, four STP of capacity 150 KLD, 140 KLD, 25 KLD and 15 KLD are functioning for treatment of sewage from Port and township area. Waste management are being done as per the prescribed Rules. Color coded waste bins have been provided for collection and segregation of different types of waste. Generated wastes are being handled as per the 5R concept of waste management and as per the vision of APSEZ to become "A Zero Waste to landfill Company". Waste reception facility is provided for visiting vessel. Reception facilities as per DG Shipping guidelines have been provided for visiting vessels to dispose ship generated waste. 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 are sent to an authorized recycler for proper disposal 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 in our Port and Township common areas. 2. Use of automatic on/off timers switch in street lightings 3. Use of solar light fitted with LED bulbs 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. 7. Use of VFD (variable frequency drive) in operational area for power savings. 8. Roof top solar power plant of 621 KWP capacity is installed.

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**
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 has been prepared and approved by District Administration. Periodic mock drills are being carried out. Prescribed Safety guidelines are followed at workplaces. Dedicated team lead by dedicated site safety team along with team of the Corporate are 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 has been 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 required dispersant chemicals. Seven persons have been undergone IMO Tire 1 training, three persons have undergone IMO Tire 2 training and one person has undergone IMO Tier 3 training at Port. Last drill was conducted on 14.07.2022.
XVI	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 being taken 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. Vaccination programme is being carried out regularly for our waste management teams. Our Port is ISO 45001-2018 certified Port.
XVII	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-II.** Rs.7.60 Crore has been spent towards Environment management for the period of Apr'22 to Sep'22 and the details 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**
XVIII	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.
XIX	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 Apr'22 to Sep'22 and the details expenses breakup, totaling to Rs. 2.70 Cr, is enclosed as **Annexure-IV.**
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 Collector. It should be posted on the website of the project proponent.	Noted. Annual CER plan is prepared. Budget and expenditure till date is provided in the **Annexure-V.**
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. Site-specific Conservation Plan & Wildlife Management plan has been prepared and will be submitted for approval.
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 works 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	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**
	Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.	We have received permission for 3 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 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.	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. 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,	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.

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**
	preventing waste dispersion, improving working conditions through provision of shade for the workers.	• 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 I)**. • 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 Apr'22 to Sep'22.
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 are in position 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	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

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**
	shall also have their consent to the implementation of components of the plan which involve the participation of these departments.	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. In 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	
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. Seven persons have been undergone IMO Tire 1 training and three persons have undergone IMO Tire 2 training and one person has undergone IMO Tier 3 training at Port. Oil Spill drills are conducted on a

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**
		regular basis and the last drill was conducted on 14.07.2022.
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 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 MoEF&CC accredited laboratory. There is no adverse impact on water quality and marine productivity in the vicinity.
VII	Total freshwater 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 MOEF&CC 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.
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.	36093.031 KL of wastewater generated during Apr'22 to Sep'22 and has been treated in STP. Treated water is used for Horticulture purpose as per the Consent to Operate(CTO) given by OSPCB.
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 & MOEF&CC laboratory. The

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**
		Monitoring results are also submitted to the regional office on regular basis. The copy is enclosed as **Annexure – I.**
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.	Complied. As a part of existing operations, • Vehicle maintenance is being conducted periodically. DG sets are provided with acoustic enclosers. • Personnel exposed to noise levels beyond threshold limits have 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 & MOEF&CC 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.	Complied. 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.	Complied. As part of Existing operation, noise monitoring is carried out at 6 (six) locations, on monthly basis by engaging NABL & MOEF&CC accredited laboratory. All results are within the prescribed limits. The result is enclosed as **Annexure – I.**
	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.	Complied. DPCL has installed solar lights along the roads and common areas. Solar power generation activity will be continued in other areas. Roof top Solar power plant of 621kwp capacity is installed.
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, maintenance dredging has been carried out during the period of Apr'22 to Sep'22. As stipulated in EIA report and discussed in the EAC, dredged materials are disposed inside sea at MOEF&CC approved designated location. The marine water quality monitoring is being carried out by NABL & MOEF&CC accredited laboratory on periodical

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.		
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		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	No effluent is being generated from Port activities. However, as a part of existing operation 3 nos. of settling ponds has been constructed to treat the surface runoff. Hazardous waste is being handled as per the Hazardous waste Management Rule. 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 Apr'22 to Sep'22, a total quantity of 188.806 MT of solid waste has been handled in line to 5R concept. Biodegradable wastes are being 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 Apr'22 to Sep'22, a total quantity of 188.806 MT of solid waste has been handled in line to 5R concept. Biodegradable wastes are used for compost preparation. Recyclable wastes are handed over to authorized recyclers. Plastic wastes are being sent to Cement industry for Co-processing.
VII	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the	Complied. CFLs and TFLs are properly collected and disposed of for recycling to authorized e-waste

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**
	prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination	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 has been prepared for Dhamra Port and submitted to District Administration and Coast guard. List of equipment is enclosed as **Annexure-VI**. 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. Seven persons have been undergone IMO Tire 1 training, three persons have undergone IMO Tire 2 training and one person has undergone IMO Tier 3 training at Port.
	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.	Around 15000 nos. of native trees have been planted in degraded village forest land and 13000 nos. of trees have been planted in Port during Apr'22 to Sep'22. Around 15000 nos. of native trees have been planted as a part of community plantation. Earlier plantation has been done along both edges of the 62.5 km rail corridor, in adjacent villages and inside the port premises. Photographs are enclosed as **Annexure-VII.** 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 and local species like Casuriana, Terminalia, Bahunia, Pongamia, Tecoma, Peltophoroum, Delonix, Neem, Calliandra, Bakul,Plumeria, Conocarpous etc are produced.
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.
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.

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**
		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 from Apr'22 to Sep'22 is enclosed as **Annexure I.**
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 & is being complied.
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 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	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 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 & MoEF&CC 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 & Complied. As a part of existing operation periodic VOCs monitoring is being carried out by NABL & MoEF&CC accredited laboratory. Report is enclosed as **Annexure - I.**
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.

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**
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 Apr'22 to Sep'22 is enclosed as **Annexure-VIII.**
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 are 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 village areas 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, health care, STP, safe drinking water etc. are provided in this colony. Photographs attached as **Annexure IX**.
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.

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**
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 reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	Noted & will be complied. As a part of existing operation EMP has been prepared**.** Environment Management Plan is enclosed as **Annexure II**.
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/2021-096 dated 23.11.2021.

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	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 2021-22 was submitted to SPCB Odisha vide our letter no. DPCL/ENV/OSPCB/2022-093 dated 21.09.2022. Copy is attached as **Annexure-X**.
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 & MOEF&CC accredited laboratory. The Monitoring data is being displayed at DPCL main gate for public view.
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.	Noted and is being complied.
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 II.** 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 &	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**
	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 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

MONTHLY ENVIRONMENT MONITORING REPORT

SEPTEMBER- 2022

Directed by

THE DHAMRA PORT COMPANY LIMITED

adani

Ports and Logistics

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

Conducted by

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MSK TESTING & INSPECTION

Report No: BBS/300A **Date: 01.10.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dasinga, Bhadrak, Odisha**
Work Order No.	**4602017664**
Reference No.	**MSKCL/ED/2022/23/00300**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Colony Area**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**
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_2 ($\mu g/m^3$)	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)
04.09.2022	50.30	30.10	8.70	25.40	0.67	18.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.09.2022	54.60	26.50	6.90	20.40	0.71	12.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.09.2022	57.40	28.70	7.40	21.70	0.68	18.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.09.2022	60.70	30.90	6.70	27.20	0.60	21.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.09.2022	48.30	23.60	6.30	19.60	0.69	14.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.09.2022	55.60	28.80	7.40	24.30	0.77	18.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.09.2022	46.20	24.40	8.10	18.60	0.51	17.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.09.2022	49.10	23.80	7.30	19.90	0.44	15.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**52.06**	**26.72**	**7.37**	**23.40**	**0.61**	**16.61**	**<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 23:2018**	**IS 5182: Part 09:1974**	**EPA - IO3.4In ductively 1999**	**EPA - IO3.4In ductively 1999**	**EPA - IO3.4In ductively 1999**	**IS 8183(Part 11):2006 Reaff.2012**	**IS 8183(Part 12):2004 Reaff.: 2014**

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

Prepared By – S. Kanungo

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MSK
TESTING • INSPECTION

Report No: BBS/300B **Date: 01.10.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4802017684**
Reference No.	**MSKGL/ED/2022-23/00300**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Kanak Prasad Village**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (ug/m³)	$PM_{2.5}$ (ug/m³)	SO_2 (ug/m³)	NO_2 (ug/m³)	CO (mg/m³)	NH_3 (ug/m³)	O_3 (ug/m³)	Pb (ug/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (ug/m³)	BaP (ng/m³)
04.09.2022	62.40	32.10	7.80	25.20	0.69	24.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.09.2022	58.90	27.70	6.90	22.40	0.48	20.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.09.2022	50.40	26.30	7.40	18.70	0.74	15.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.09.2022	48.70	24.70	7.10	25.70	0.52	24.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.09.2022	44.80	26.80	6.10	22.10	0.45	19.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.09.2022	49.60	24.40	6.40	21.40	0.78	16.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.09.2022	51.20	28.70	6.70	24.70	0.81	20.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.09.2022	48.70	27.70	7.20	17.90	0.66	13.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**52.27**	**26.67**	**6.98**	**22.26**	**0.64**	**19.35**	**<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 Issue 1,1999	EPA - IO3.4 Issue 1,1999	EPA - IO3.4 Issue 1,1999	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 Offi. Notification

Prepared By – Checked By-

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MSK TESTING ■ INSPECTION

Report No: ESS/300C

Date: 01.10.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00300
Type of Sample	Ambient Air Sample
Sampling Location	Near DMH
Sampling Done by	Mr. Soumya Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM10 (ug/m³)	PM2.5 (ug/m³)	SO2 (ug/m³)	NOx (ug/m³)	CO (mg/m³)	NH3 (ug/m³)	O3 (ug/m³)	Pb (ug/m³)	Ni (ng/m³)	As (ng/m³)	Cd/Cr (ng/m³)	BaP (ng/m³)
01.09.2022	59.70	30.10	6.70	29.10	0.66	23.60	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
07.09.2022	58.30	29.80	8.40	24.70	0.71	21.80	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
07.09.2022	60.10	33.30	7.10	26.30	0.51	20.40	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
14.09.2022	64.20	30.60	7.40	22.10	0.59	17.60	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
18.09.2022	57.50	42.40	8.10	28.40	0.67	23.90	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
21.09.2022	58.60	29.50	6.90	24.90	0.72	26.40	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
25.09.2022	60.40	57.40	6.70	29.40	0.70	22.60	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
28.09.2022	58.70	29.10	7.20	19.80	0.47	18.70	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
Monthly Average	59.70	40.81	7.31	25.60	0.59	22.38	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
CPCB, New Delhi NAAQ 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
INSPECTION

Report No: BDS/360D **Date: 01.10.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKL/L/E13/2022-23/08900
Type of Sample	Ambient Air Sample
Sampling Location	Near Jetty
Sampling Done by	Mr. Somaya Ranjan Ghosh
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM10 (µg/m³)	PM2.5 (µg/m³)	SO2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH3 (µg/m³)	O3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	CaHs (ng/m³)	BaP (ng/m³)
04.09.2022	70.40	35.10	8.10	33.80	0.77	30.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.09.2022	59.40	32.20	6.40	28.60	0.63	22.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.09.2022	61.70	31.60	7.50	29.40	0.48	28.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.09.2022	58.20	32.20	7.10	30.60	0.57	26.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.09.2022	60.10	31.70	6.80	24.70	0.60	19.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.09.2022	52.70	28.50	6.40	22.10	0.71	18.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.09.2022	57.40	25.60	7.60	20.80	0.45	16.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.09.2022	60.30	34.30	7.30	31.10	0.82	23.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**62.01**	**31.82**	**7.15**	**27.51**	**0.63**	**23.21**	**<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

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MSK TESTING ● INSPECTION

Report No: BBS/300E **Date: 01.10.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4802017684**
Reference No.	**MSKGI/EID/2022-23/00300**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Dosinga Village**
Sampling Done by	**Mr. Soumya Ranjan Ghosh**
Sampling Duration	**24hrs**
Monitoring Instrument	**HDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler**

Date	PARAMETERS											
	PM2.5 (µg/m³)	PM10 (µg/m³)	SO2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH3 (µg/m³)	O3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	CrIII (ng/m³)	BaP (ng/m³)
04.09.2022	46.70	71.40	6.80	19.60	0.49	14.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.09.2022	56.80	87.60	6.70	28.30	0.56	24.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.09.2022	51.10	80.10	7.90	24.10	0.69	30.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.09.2022	52.30	77.60	6.70	22.80	0.78	19.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.09.2022	59.60	79.70	6.80	31.60	0.44	23.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.09.2022	46.30	73.80	7.10	18.70	0.63	14.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.09.2022	53.60	72.70	6.10	17.40	0.77	13.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.09.2022	44.80	70.90	7.40	15.70	0.66	12.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**51.80**	**76.10**	**6.87**	**23.25**	**0.63**	**17.96**	**<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 :2017)**	**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

Checked By: A. K. Rath

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MSK TESTING & INSPECTION

Report No: BBS/3001

Date: 01.10.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	4802017684
Reference No.	MSKGL/T.D/2022-23/00400
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near Bhitarkanika**
Sampling Done by	**Mr. Soumya Ranjan Chada**
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETER											
	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/m³)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni ($\mu g/m^3$)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
04.09.2022	32.40	26.30	6.70	24.10	0.48	21.70	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
07.09.2022	47.60	24.90	6.90	20.60	0.70	16.40	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
12.09.2022	58.70	27.70	7.10	24.40	0.61	27.30	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
14.09.2022	40.40	21.40	6.50	18.50	0.54	13.40	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
18.09.2022	44.20	26.30	7.30	22.60	0.50	19.80	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
21.09.2022	42.10	22.10	6.60	16.40	0.46	17.30	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
25.09.2022	30.90	24.90	6.80	21.80	0.42	17.30	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
28.09.2022	49.30	22.70	7.40	25.70	0.57	20.80	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
Monthly Average	**48.17**	**24.56**	**6.85**	**21.89**	**0.50**	**18.67**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<1.2**	**<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 .2017	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 Gazette Notification

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/309
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/00700
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day Leq. Time dB(A)		Night Time Leq. dB(A)	
			Results	LIMIT	Results	LIMIT
1.	03.09.2022	Colony Area (R)	51.6	55	40.8	45
2.	05.09.2022	Kunak Prasad Village (R)	48.1	55	39.1	45
3.	10.09.2022	Near BMH (I)	65.8	75	49.5	70
4.	12.09.2022	Near Jetty (I)	72.4	75	60.6	70
5.	13.09.2022	Dosinga Village (R)	50.2	55	42.5	45
6.	26.09.2022	Near Bhitarkanika (Eco Sensitive Zone)	45.1	50	38.7	40

Noise Limit as per CPCB

Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

NOTE :
Day Time : 06.00 Hr.-22.00 Hr.
Night Time:22.00 Hr.-06.00 Hr.

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. : BHS/710
Date : 01.10.2022
Sample No. : MSKGH/HO/2022-23/09/00920
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg. dB(A)
1.	01.09.2022	Stack Yard	82.1	44.7	66.8
2.	04.09.2022	Wagon Tippler	85.3	51.4	81.7
3.	06.09.2022	Near Silo	78.8	54.6	76.1
4.	19.09.2022	Near Stacker & Reclaimer	80.4	68.4	82.5
5.	19.09.2022	Project Area	75.6	42.8	68.6
6.	20.09.2022	Transfer Point	88.4	64.7	80.2
7.	14.09.2022	Workshop	72.6	50.8	64.5
8.	21.09.2022	Steel Yard	79.1	52.3	69.4
9.	18.09.2022	FCC Shed	68.4	47.2	60.9
10.	15.09.2022	Near Port Canteen	62.4	49.4	63.2

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

Report Prepared by:

For Mitra S.K. Private Limited

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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/301
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/08/00840
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 03.09.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H B	6.61	6.75
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	126.0	7.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	124.0	7.6
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	264.0	20.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	6.8	<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); Reflm:2014	31.0	2.4
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1300.0	69.0

Report Prepared by:

MITRA S. K. PRIVATE LIMITED BBSR

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/303
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/01711
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.52	6.80
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	96.0	11.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	146.0	5.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	320.0	15.2
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	7.1	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500 NH3-F 2017	18.0	1.9
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reim:2014	26.0	3.2
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1300.0	96.0

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. : BH5/307
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/00842
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 03.09.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H B	6.69	7.14
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	98.0	9.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	96.0	6.2
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	224.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	6.7	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	15.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reflm:2014	26.0	1.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1100.0	78.0

Report Prepared by:

For 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. : HHS/308
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/01713
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	—	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	—	6.5 9.0	APHA (23rd Edition) 4500 H-B	6.90	7.21
4.	Appearance	—	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	74.0	5.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	126.0	6.8
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	278.0	18.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	9.3	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	22.0	0.96
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	36.0	1.8
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2000.0	54.0

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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/302
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/00844
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 03.09.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	--	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.58	7.06
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	126.0	7.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	144.0	4.6
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	308.0	12.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	9.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	24.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reffm:2014	39.0	1.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1900.0	110.0

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/304
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/01715
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.80	7.60
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	84.0	6.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	162.0	4.2
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	360.0	15.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	13.0	<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); Reflm:2014	39.0	1.6
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1600.0	80.0

Report Prepared by:

MITRA S. K. PRIVATE LIMITED BBSR

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/305
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/00846
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 03.09.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.67	7.36
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	131.0	11.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	168.0	6.4
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	360.0	20.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	12.0	<1.4
9.	Ammoniacal Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500 NH3-F 2017	30.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	41.0	3.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1600.0	190.0

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 : DOSINGIA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/306
Date : 01.10.2022
Sample No. : MSKGL/10/2022-27/09/01717
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23rd Edition) 4500 H-B	6.70	7.90
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	146.0	9.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	196.0	5.2
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	410.0	14.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	12.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	30.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	44.0	1.0
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2800.0	150.0

Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING & INSPECTION

Ref : MSKGL/FD/2022-23/00600

Date : 01.10.2022

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800017684**
Reference No.	**MSKGL/FD/2022-23/00600**
Type of Sample	**Piezometric Well**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**

GROUND WATER LEVEL MONITORING REPORT

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	15.09.2022	11.05
2	Near WTP	15.09.2022	11.4

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/312
Date : 01.10.2022
Sample No. : MSKGL/FD/2022/23/09/01720
Date of sampling : 15.09.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Soumya Ranjan Ghadai

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Unity	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 25° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11) 1984 Rflm: 2012	7.61
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24) 1986 Rflm: 2014	60.0
3.	Cyanides (as Cn)	mg/l	0.05	200	IS 3025 (Part 40)- 1991 Rflm: 2014	46.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 4029 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 4029 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 4029 (Part 2) 2004 RA 2014	BDL(DL:0.07)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 4029 (Part 2) 2004 RA 2014	BDL(DL:0.07)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rflm: 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 Rflm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rflm: 2013	(0.4)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983, Rflm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rflm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rflm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26) 1986 Rflm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53) 1988 Rflm: 2014	0.24
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32) 1988 Rflm: 2014	104.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rflm:2012	264.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rflm: 2009	182.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 4029 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rflm: 2014	28.0
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 Rflm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992, Rflm: 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 4029 (Part 14)- 2013	40.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/312

Date- 01.10.2022

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.	Chloramine.	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.

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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. : BDS/313
Date : 01.10.2022
Sample No. : MSKOL/FD/2022-23/09/0173
Date of sampling : 15.09.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Soumya Ranjan Ghadai

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	7.58
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	70.0
3.	Chloride (as Cl)	mg/l	75	250	IS 3025 (Part 32)- 1991 Rffm: 2014	33.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 7) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 7) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 7) 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 7) 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: 2014	0.34
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	0.31
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32) 1988 Rffm: 2014	110.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16) 1984; Rffm:2012	344.0
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	266.0
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:0.04)
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	450

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BBS/515

Date- 01.10.2022

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29) 1991; RAm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; RAm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986, RAm: 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 RAm: 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

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/314
Date : 01.10.2022
Sample No. : MSKGL/FD/2022-23/09/01721
Date of sampling : 15.09.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 25° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rflm: 2012	7.86
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rflm: 2014	38.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rflm: 2014	49.0
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 Rflm: 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 Rflm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60) 2008 Rflm: 2013	0.45
12.	Odour	Hazen	5	15	3025 (Part 4) 1983; Rflm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rflm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rflm: 2013	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rflm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rflm: 2014	0.76
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rflm: 2014	132.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rflm:2012	258.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rflm: 2009	209.0
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 Rflm: 2014	20.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	178.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.03)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rflm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rflm: 2014	BDL(DL:0.0001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
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

Continuation Sheet

MSK
TESTING & INSPECTION

Ref. No. BBS/314

Date- 01.10.2022

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Reffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Reffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Reffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Reffm: 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

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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. : RBS/324
Date : 01.10.2022
Sample No. : MSKGL/TD/2022-23/09/00819
Date of sampling : 11.09.2022
Sampling Description : Ground Water
Sampling Location : Kanak Prasad
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 20° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rffm: 2012	7.83
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rffm: 2014	67.0
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	NTU	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	0.77
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rffm: 2014	128.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rffm 2012	336.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23) - 1986 Rffm: 2009	181.0
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:0.1)
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	0.28
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:0.002)
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	41.0

Continuation Sheet

MSK TESTING ■ INSPECTION

Ref. No. BBS/324 **Date: 01.10.2022**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rffm: 2014	BDL(DL:0.05)
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	0.3	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

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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 : 01.10.2022
Sample No. : MSKGL/TD/2022-23/09/00520
Date of sampling : 11.09.2022
Sampling Description : Ground Water
Sampling Location : Balisahi
Sampling Done By : Mr. Soumya Ranjan Ghadai

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	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 25° C)	---	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rflm: 2012	8.01
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rflm: 2014	58.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rflm: 2014	54.0
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:0.03)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.05)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rflm: 2014	BDL(DL:0.0007)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.0001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rflm: 2014	BDL(DL:0.3)
11	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rflm: 2013	0.48
12.	Colour	Hazen	5	15	3025 (Part 4)-1983, Rflm:2012	BDL(DL:1.0)
13	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5) 1983 Rflm:2012	Agreeable
14	Turbidity	N.T.U	1	5	IS 3025 (Part 10) 1984 Rflm: 2012	BDL(DL:1.0)
15	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rflm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rflm: 2014	0.20
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rflm: 2014	119.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rflm:2012	324.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rflm: 2009	320.0
20.	Aluminum (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 Rflm: 2014	25.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21) 2013	181.0
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 Rflm: 2014	1.6
26	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43). 1992: Rflm: 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	46.0

Continuation Sheet

MSK TESTING ■ INSPECTION

Ref. No. RBS/335

Date- 01.10.2022

32.	Sulphide (as H2S)	mg/l	0.03	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 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.

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MSK
INSPECTION

TEST REPORT

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

Report No. : BBS/326
Date : 01.10.2022
Sample No. : MSKGL/TD/2022-23/09/0082
Date of sampling : 11.09.2022
Sampling Description : Ground Water
Sampling Location : Dosinga
Sampling Done By : Mr. Soumya Ranjan Ghadai

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	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 25° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Reffm: 2012	7.65
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Reffm: 2014	44.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Reffm: 2014	49.0
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 Reffm: 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 Reffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Reffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Reffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Reffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Reffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Reffm: 2014	0.27
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Reffm: 2014	108.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Reffm:2012	310.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Reffm: 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 Reffm: 2014	28.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21) 2014	167.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
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 Reffm: 2014	1.6
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Reffm: 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	48.0

Continuation Sheet

MSK TESTING INSPECTION

Ref. No. RRS/326 **Date- 01.10.2022**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Reffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Reffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Reffm: 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 Reffm: 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)

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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. : BHS/327
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/00788
Sample Description : Surface Water
Sampling Location : Matai River Near DPCL Intake Point
Date of Sampling : 11.09.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Unity	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	7.42
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 D 2017	0.31
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound 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	3.0	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 4932(Part 48) 1994; Reffm: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 23rd 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:0.02)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	70
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 27°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	7.2
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	24.0
24.	Oil & Grease	mg/l	10.0	APHA 23rd Edition, 5520B 2017	BDL(DL:0.1)
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:0.1)
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D,2017	BDL(DL:0.01)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Reffm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition,4500P, B -D 2017	0.18
30.	Ammonia as NH_3	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)

Continuation Sheet

MSK TESTING INSPECTION

Report No. : BHS/327 **Date: 01.10.2022**

31.	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA (24th Edition) 4500- NO_3-E, 2017	0.43
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/T&E/3/55	Pass through 850µm IS sieve
34	Dissolved Oxygen	mg/l	-------	APHA 23rd-2012,4500-O-C	6.3

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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/328
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/007/89
Sample Description : Surface Water
Sampling Location : Raw Water Reservoir
Date of Sampling : 11.09.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Unit	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	7.34
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	0.49
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition,3500 Fe B 2017	3.8
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound 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	3.0	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; RAm: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 B 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	197.0
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edn,2550 B	25.0
22.	BOD (3days at 27°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	26.0
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	72.0
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	BDL(DL:0.3)
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D 2017	BDL(DL:0.01)
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)

Continuation Sheet

MSK TESTING & INSPECTION

Report No.: BES/328 **Date : 01.10.2022**

31	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA (23rd Edition) 4500- NO_3-B, 2017	0.36
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&B/3/55	Pass through 850µm IS sieve
34.	Dissolved Oxygen	mg/l	------	APHA 23rd Ed.2017,4500-O-C	6.4

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MSK TESTING & INSPECTION

Date: 01.10.2022

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4802017684**
Reference No.	**MSKGI./ED/2022-23/00100**
Type of Sample	**Marine Water**
Sampling Location	**Dhamra River Mouth**
Date of Sampling	**18.09.2022**
Date of Analysis	**18.09.2022 to 01.10.2022**
Sampling Done by	**Mr. Sonmya Ranjan Ghadai**

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	41.0
5	pH	----	APHA (23rd Edition) 4500-H-B	7.44	7.09
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	20115.0	19458.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	9866.0	7239.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	120.0	104.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	10220.0	9718.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	1157.0	1097.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	340.0	270.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	1587.0	1219.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl D	7751.0	6580.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.4	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	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220D,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	1097.0	870.0
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	<0.5	<0.5
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	<0.5	<0.5
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 B	<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;Reffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Reffm:2014	<0.5	<0.5

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TESTING • INSPECTION

Date: 01.10.2022

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4802017684**
Reference No.	**MSKGL/ED/2022-23/00100**
Type of Sample	**Marine Water**
Sampling Location	**Dry Bulk Cargo Berth Face**
Date of Sampling	**18.09.2022**
Date of Analysis	**18.09.2022 to 01.10.2022**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**

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	97.0	72.0
5	pH	—	APHA (23rd Edition) 4500-H-B	7.31	6.88
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	17217.0	16905.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	14360.0	11230.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	144.0	97.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	12609.0	10197.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	1888.0	1455.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	350.0	280.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	1633.0	1080.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	5147.0	3210.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition) 4500-O C,2017	6.4	5.8
15	Biochemical Oxygen Demand (5 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) 5520B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO_4)	mg/l	APHA (23rd Edition) 4500-P D	<0.15	<0.15
19	Sulphates (as SO_4)	mg/l	APHA (23rd Edition)4500-SO4-E	745.0	598.0
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	<0.5	<0.5
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	<0.5	<0.5
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 B	<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;Reffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2540B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1991;Reffm:2014	<0.5	<0.5

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Date: 01.10.2022

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dozinga, Bhadrak, Odisha**
Work Order No.	**4802017684**
Reference No.	**MSKGL/ED/2022-23/00100**
Type of Sample	**Marine Water**
Sampling Location	**Liquid/Gas/Cyrogenic Berth Face**
Date of Sampling	**18.09.2022**
Date of Analysis	**18.09.2022 to 01.10.2022**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**

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	140.0	102.0
5	pH	----	APHA (23rd Edition) 4500-H-B	7.79	6.87
6	Electrical Conductivity	mho/cm	APHA (23rd Edition) 2510 B	15234.0	11649.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	9237.0	7066.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	159.0	90.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	12108.0	9980.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	2245.0	1951.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	510.0	430.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	1697.0	1345.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	7714.0	5845.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.8	6.2
15	Biochemical Oxygen Demand (4 days at 27°C)	mg/l	APHA (23rd Edition) 5210B,2017	<2.0	<2.2
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220D,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	695.0	580.0
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	<0.5	<0.5
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	4.7	1.9
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	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rflm:2014	<0.5	<0.5

Prepared By – S K Ranjan

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MSK
TESTING • INSPECTION

Date: 01.10.2022

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dasinga, Bhadrak, Odisha**
Work Order No.	4800017684
Reference No.	MSKGL/ED/2022/2A/00100
Type of Sample	**Marine Water**
Sampling Location	**Along Channel of 1Km**
Date of Sampling	**18.09.2022**
Date of Analysis	**18.09.2022 to 01.10.2022**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**

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	87.0	74.0
5	pH	----	APHA (23rd Edition) 4500-H-B	7.94	7.48
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	53079.0	25457.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	17218.0	15682.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	139.0	114.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	27558.0	34117.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3930.0	3660.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	580.0	391.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	3644.0	3219.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	13500.0	11780.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	6.6	5.9
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) 5220D,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	1574.0	1344.0
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	<0.5	<0.5
22	Ammoniacal 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	<0.3	<0.3
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,Reffm 2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994:Reffm:2014	<0.5	<0.5

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Date: 01.10.2022

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4802017684**
Reference No.	**MSKGL/ED/2022-23/00100**
Type of Sample	**Marine Water**
Sampling Location	**Along Channel at 5Km**
Date of Sampling	**18.09.2022**
Date of Analysis	**18.09.2022 to 01.10.2022**
Sampling Done by	**Mr. Soumya Ranjan Chadni**

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	47.0
5	pH	—	APHA (23rd Edition) 4500-H-B	7.09	6.97
6	Electrical Conductivity	mho/cm	APHA (23rd Edition) 2510 B	43500.0	27100.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B 2017	28290.0	19094.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	145.0	107.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	24101.0	20812.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	4783.0	3419.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	790.0	688.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	3451.0	3228.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	14310.0	12827.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/Cl	6.5	5.9
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) 5220D,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	1266.0	1290.0
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	<0.5	<0.5
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	2.4	0.92
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 B	<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)-1991:Rflm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1984:Rflm:2014	<0.5	<0.5

Prepared By –

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MSK TESTING & INSPECTION

Date: 01.10.2022

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4507017684**
Reference No.	**MSKGL/ED/2022-23/00100**
Type of Sample	**Marine Water**
Sampling Location	**Along Channel at 10Km**
Date of Sampling	**18.09.2022**
Date of Analysis	**18.09.2022 to 01.10.2022**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**

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	110.0	64.0
5	pH	---	APHA (23rd Edition) 4500 H-B	8.22	7.81
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	34172.0	30251.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	20867.0	19256.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	190.0	112.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	22023.0	19812.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	4820.0	4765.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	750.0	610.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	3962.0	3841.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	190.0	135.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C(N)	3.7	4.9
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) 5220D,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5520B,2017	<1.4	<1.4
18	Dissolved phosphate (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	1317.0	1084.0
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	<0.5	<0.5
22	Ammoniacal 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	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C.H.OH)	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 4739(Part 48)-1994;Rflm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1991;Rflm:2014	<0.5	<0.5

Prepared By – S. Kumar

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MSK TESTING & INSPECTION

Date: 01.10.2022

MARINE WATER QUALITY REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosingu, Bhadrak, Odisha**
Work Order No.	**4802017684**
Reference No.	**MSKGL/ED/2022-23/00100**
Type of Sample	**Marine Water**
Sampling Location	**Near Kanika Island**
Date of Sampling	**18.09.2022**
Date of Analysis	**18.09.2022 to 01.10.2022**
Sampling Done by	**Mr. Soumya Ranjan Chadni**

SL. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (24th 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 (24th Edition) 2130B	174.0	158.0
5	pH	----	APHA (23rd Edition) 4500-H-B	8.29	7.66
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	30785.0	29786.0
7	Salinity	mg/l	APHA (24th Edition) 2520B,2017	22187.0	19901.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	230.0	176.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	32417.0	29887.0
10	Total Hardness	mg/l	APHA (24th Edition) 2340B 2017	3771.0	3480.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	970.0	780.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2255.0	2019.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	13630.0	12186.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/O	6.1	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	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220D,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	1687.0	1433.0
20	Nitrite (as NO_2)	mg/l	APHA (24th Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition)4500-NO3-E	<0.5	<0.5
22	Ammoniacal 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	<0.5	<0.5
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 B	<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) 3500Cr 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 (24th Edition) 5530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994,Rflm:2014	<0.5	<0.5

Prepared By

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MSK TESTING & INSPECTION

Date: 01.10.2022

PHYTOPLANKTONMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00100
Type of Sample	Marine Sample (Phytoplankton)
Sampling Location	S1:Dhamra River Mouth; S2:Dry Bulk Cargo Berth Face; S3:Along Channel at 5Km; S4:Along Channel at 1Km; S5:Liquid/Gas/Cyrogenic Berth Face; S6: Along Channel at 10Km; S7:Near Kanika Island
Date of Sampling	18.09.2022
Date of Analysis	18.09.2022 to 01.10.2022
Sampling Done by	Mr. Soumya Ranjan Ghadai

Name of the Parameters		Total count	No of species	Chlorophyll-a	Major Species
Unit		Units/L	Nos.	mg/l	—
Testing Method		APHA 10300	APHA 10200	APHA 10200H	APHA (23rd Edition) 10200
Analysis Result					
S-1	Surface Water	15000	9	0.84	Navicula, Cyclotella
	Bottom water	21000	4	0.54	Enteromorpha Zostera
S-2	Surface Water	13500	8	0.92	Moucotia, Enteromorpha
	Bottom water	10000	3	0.40	Vallisneria,, Zostera
S-3	Surface Water	22000	6	0.74	Cyclotella, Moucotia
	Bottom water	19000	8	0.89	Vallisneria, Moucotia
S-4	Surface Water	16000	3	0.49	Mousoria, Fragilaria
	Bottom water	22000	6	0.76	Nanocystis, Zostera
S-5	Surface Water	24000	2	0.66	Vallisneria, Phormidium
	Bottom water	20000	4	0.54	Enteromorpha, Navicula
S-6	Surface Water	15000	8	0.78	Phormidium, Calothrix
	Bottom water	13000	7	0.94	Phormidium s, Enteromorpha
S-7	Surface Water	12000	5	0.86	Cyclotella, Moucotia
	Bottom water	35000	4	0.67	Phormidium, Calothrix

Prepared By –

Checked By-

Mitra S. K. Private Limited

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MSK TESTING • INSPECTION

Date: 01.10.2022

ZOOPLANKTONMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00100
Type of Sample	Marine Sample (Zooplankton)
Sampling Location	S1:Dhamra River Mouth S2:Dry Bulk Cargo Berth Face S3:Liquid/Gas/Cyrogenic Berth Face S4:Along Channel at 1Km S5:Along Channel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	18.09.2022
Date of Analysis	18.09.2022 to 01.10.2022
Sampling Done by	Mr. Soumya Ranjan Ghadai

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	1200	2	Daphnia
S-3	Surface Water	None	None	None
	Bottom water	1800	1	Daphnia
S-4	Surface Water	None	None	None
	Bottom water	None	None	None
S-5	Surface Water	2000	4	Daphnia
	Bottom water	None	None	None
S-6	Surface Water	None	None	None
	Bottom water	None	None	None
S-7	Surface Water	None	None	None
	Bottom water	None	None	None

Prepared By: S. Kanungo

Checked By-

Mitra S. K. Private Limited

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Bhubaneswar - 751015
[CIN: U51909WB1956PTC023037]

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MSK TESTING & INSPECTION

Date: 01.10.2022

MICROBIOLOGICAL MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Kendrapara, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00100
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 Channal at 1Km S5:Along Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	18.09.2022
Date of Analysis	18.09.2022 to 01.10.2022
Sampling Done by	Mr. Saumya Ranjan Ghadai

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 9th Edn	APHA 9221 B	APHA 9221 B	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	90.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	84.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-3	Surface Water	150.0	6.4	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	180.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-4	Surface Water	70.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	170.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-4	Surface Water	140.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	98.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-5	Surface Water	65.0	<1.8	<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	95.0	<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	190.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	45.0	5.2	<1.8	<1.8	<1.0	Absent	Absent	Absent

Prepared By

Checked By

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MSK TESTING • INSPECTION

Date: 01.10.2022

PRIMARY PRODUCTIVITYMONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4802017684**
Reference No.	**MSKGL/ED/2022-23/00100**
Type of Sample	**Marine Sample (Productivity)**
Date of Sampling	**18.09.2022**
Date of Analysis	**18.09.2022 to 01.10.2022**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**

Sl. No.	**Monitoring Location**		**Gross Primary productivity (O2mg/L/day)**	**Net Primary productivity (O2mg/L/day)**
1	**S1:Dhamra River Mouth**	**Surface Water**	1.8	0.9
		Bottom water	2.2	1.6
2	**S2:Dry Bulk Cargo Berth Face**	**Surface Water**	2.4	1.4
		Bottom water	1.6	0.7
3	**S3:Liquid/Gas/Cyrogenic Berth Face**	**Surface Water**	3.0	1.5
		Bottom water	1.2	0.8
4	**S4:Along Channel at 1Km**	**Surface Water**	2.6	1.8
		Bottom water	1.5	0.4
5	**S5:Along Chonel at 5Km**	**Surface Water**	2.3	1.2
		Bottom water	1.7	0.6
6	**S6: Along Channel at 10Km**	**Surface Water**	2.4	1.3
		Bottom water	1.8	0.4
7	**S7:Near Kanika Island**	**Surface Water**	2.6	1.0
		Bottom water	2.0	0.1

Prepared By – S. Kaung

Checked By-

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MSK
TESTING & INSPECTION

Date: 01.10.2022

PHYTO BENTHOSMONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	4802017684
Reference No.	MSKCL/E/II/2022-23/00100
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	**18.09.2022**
Date of Analysis	**18.09.2022 to 01.10.2022**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**

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 (Shannon's Index)	APHA 10500 B
Analysis Result						
S-1	Surface Water	1477	152	8	0.5141	Copepods
	Bottom water	1647	216	10	1.7452	N.longsigma
S-2	Surface Water	2078	257	13	1.0874	Ctenophora,
	Bottom water	1700	189	6	1.3115	Ditylum
S-3	Surface Water	1389	131	9	0.8409	Ctenophora, Ditylum,
	Bottom water	1874	141	15	0.4405	Podasira
S-4	Surface Water	2371	244	18	0.7812	Ditylum, N.longsigma
	Bottom water	1578	191	11	0.6202	Ditylum, Echinodermata
S-5	Surface Water	1389	210	8	1.4772	Podacha, Copepods
	Bottom water	2278	202	25	1.5613	Ditylum, Echinodarmata
S-6	Surface Water	2245	301	56	2.2421	Podasira, Copepods
	Bottom water	1179	147	7	0.9722	Ctenophora, Podasira
S-7	Surface Water	1478	108	4	0.4854	Ditylum, Podasira
	Bottom water	1300	160	10	0.8317	Podasira N.longsigma

Prepared By – S. Kaung

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Date: 01.10.2022

TOTAL FAUNA MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4500017684**
Reference No.	**MSKGL/ED/2022-23/00100**
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 Kunika Island**
Date of Sampling	**18.09.2022**
Date of Analysis	**18.09.2022 to 01.10.2022**
Sampling Done by	**Mr. Soumyn Ranjan Ghadai**

Name of the Parameters		Name of phylum	Class & No. of individuals encountered	Total no of species encountered	Total fauna per m²
Testing Method		APHA 10700	APHA 10700	APHA 10700	APHA 10700
			Analysis Result		
S-1	Surface Water	Annelida, Mollusca	Plychaeta-36,Bivalvia-12	34	128
	Bottom water	Annelida, Mollusca	Plychaeta-65,Bivalvia-21	33	118
S-2	Surface Water	Annelida, Mollusca	Plychaeta-70,Bivalvia-30	48	151
	Bottom water	Annelida, Mollusca	Plychaeta-69,Bivalvia-40	98	287
S-3	Surface Water	Anthropoda, Annelida	Plychaeta-80,Bivalvia-33	170	496
	Bottom water	Annelida, Mollusca	Plychaeta-32,Bivalvia-19	66	254
S-4	Surface Water	Annelida, Mollusca	Plychaeta-54,Bivalvia-28	190	488
	Bottom water	Annelida, Mollusca	Plychaeta-40,Bivalvia-08	52	191
S-5	Surface Water	Annelida, Mollusca	Plychaeta-53,Bivalvia-03	102	320
	Bottom water	Annelida, Mollusca	Plychaeta-82,Bivalvia-16	90	280
S-6	Surface Water	Anthropoda, Annelida	Malagostraca-44,Palecypoda-23	164	390
	Bottom water	Annelida, Mollusca	Plychaeta-96,Gastropoda-58	174	541
S-7	Surface Water	Anthropoda, Annelida	Malagostraca-25,Palecypoda-18	50	144
	Bottom water	Anthropoda, Annelida	Plychaeta-32,Gastropoda-12	79	[illegible]

Prepared By – S Kanungo

Checked 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/340
Date : 01.10.2022
Sample No. : MSKGL/DD/2022-23/09/00100
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of Sampling : 03.09.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.5
2.	Electrical Conductivity	µS/cm	IS 3025 (Part 14)-1984;Rffm:2006	2015.0
3.	Organic Matter	%	IS 2720 (Part 22) 1972; Rffm:2015	0.86
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	150.0
5.	Moisture content	%	Lab Method	22.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	4587.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	297.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	10.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	177.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	247.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2117.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	180.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	11.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	40.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	24.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	198.0

Continuation Sheet

MSK
TESTING & INSPECTION

Ref. No. BRS/340

Date- 01.10.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	4.0
19.	Boron (as B)	mg/kg	IS 13428: 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1784.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	12.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reffm:2014	454.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	529.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	30.0
27.	Silt	%	TPM/MSK/P&E/1/36A	25.0
28.	Clay	None	TPM/MSK/P&E/1/36A	45.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1319
2.	Total count (Phytobenthos)	50 mg wet sediment	264
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	---	1.88
5.	Major Species (phytobenthos)	----	*Coscinodiscus sp. Biddulphia mobilensis*
6.	Name of Phylum (Fauna)	---	Annelida, Molluscs
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-44,Bivalvia-19
8.	Total no. of species encountered (Fauna)	Nos.	24
9.	Total fauna (Fauna)	per m^3	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/341
Date : 01.10.2022
Sample No. : MSKGL/BD/2022-23/09/0010]
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 03.09.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Reffm:2011	7.68
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Reffm:2006	2620.0
3.	Organic Matter	%	IS 2720 (Part 22) 1972; Reffm:2015	0.66
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	50.0
5.	Moisture content	%	Lab Method	14.0
6.	Chloride (as Cl⁻)	mg/kg	TPM/MSK/P&E/1/10	3347.0
7.	Sulphate (as SO_4^{2-})	mg/kg	IS 2720 (Part 27) 1977,RA 2015	1874.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/13	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	16.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	201.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	510.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	4178.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	154.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	9.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	34.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	17.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	267.0

MSK TESTING & INSPECTION

18.	Lead (as Pb)	mg/kg	EPA 6010D	10.7
19.	Boron (as B)	mg/kg	IS 13428: 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1574.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	11.6
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	427.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	390.0.
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B , Dec, 1996, 8270 D , Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	39.0
27.	Silt	%	TPM/MSK/P&E/1/36A	34.0
28.	Clay	None	TPM/MSK/P&E/1/36A	27.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Ref. No. B88/341

Date- 01.10.2022

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1469
2.	Total count (Phytobenthos)	50 mg wet sediment	332
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	---	1.69
5.	Major Species (phytobenthos)	---	*Coscinodiscus* sp
6.	Name of Phylum (Fauna)	---	Annelida, Molluscs
7.	Class & Number of individuals encountered (Fauna)	---	Plychaeta-10,Bivalvia-17
8.	Total no. of species encountered (Fauna)	Nos.	22
9.	Total fauna (Fauna)	per m²	138

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

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MSK
THINK 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/342
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-22/09/00103
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Reffm:2011	7.93
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Reffm:2006	3957.0
3.	Organic Matter	%	IS 2720 (Part 22) 1972; Reffm:2015	0.74
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	24.0
5.	Moisture content	%	Lab Method	22.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1507.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	153.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	9.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	16.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	21.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1198.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	149.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	25.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	19.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	26.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	177.0

Continuation Sheet

Ref. No. BBS/342

MSK TESTING&INSPECTION

Date- 01.10.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	11.0
19.	Boron (as B)	mg/kg	IS 14638: 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	3314.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	8.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); RHm:2014	321.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/2/68	319.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	32.0
27.	Silt	%	TPM/MSK/P&E/1/36A	39.0
28.	Clay	None	TPM/MSK/P&E/1/36A	29.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1688
2.	Total count (Phytobenthos)	50 mg wet sediment	294
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	1.98
5.	Major Species (phytobenthos)	----	*Bidulphia mobilensis, Spirulina aeruginea*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-64,Bivalvia-32
8.	Total no. of species encountered (Fauna)	Nos.	18
9.	Total fauna (Fauna)	per m²	207

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/343
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/00103
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.22
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14) 1984;Rffm:2006	3741.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.77
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	47.0
5.	Moisture content	%	Lab Method	29.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	4107.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	108.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	7.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	15.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1319.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	190.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	15.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	11.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	25.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	138.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. RKS/343

Date- 01.10.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	17.0
19.	Boron (as B)	mg/kg	IS 13428: 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1865.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	30.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rtfm:2014	207.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	213.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	45.0
27.	Silt	%	TPM/MSK/P&E/1/36A	35.0
28.	Clay	None	TPM/MSK/P&E/1/36A	20.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1284
2.	Total count (Phytobenthos)	50 mg wet sediment	725
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	—	2.71
5.	Major Species (phytobenthos)	—	*Biddulphia mobiliensis, Nitzschia fusiana*
6.	Name of Phylum (Fauna)	—	Annelida, Molluscs
7.	Class & Number of individuals encountered (Fauna)	—	Polychaeta-91,Bivalvia-30
8.	Total no. of species encountered (Fauna)	Nos.	22
9.	Total fauna (Fauna)	per m²	176

Report Prepared by: P. Kalinga

For Mitra S.K. Private Limited

Authorised 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/344
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/00104
Sample Description : Sea Sediment
Sampling Location : Dhamra River Mouth
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;RAffm:2011	7.51
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14) 1984;RAffm:2006	8155.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; RAffm:2015	1.9
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	30.0
5.	Moisture content	%	Lab Method	18.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1788.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	413.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	2.4
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	5.9
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2025.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	450.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	4.9
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.8
16.	Zinc (as Zn)	mg/kg	EPA 6010D	9.1
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK
TESTING&INSPECTION

Ref. No. BBS/344

Date- 01.10.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	7.4
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	7.9
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	3.6
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); RAfm:2014	10.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	12.6
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	36.0
27.	Silt	%	TPM/MSK/P&E/1/36A	28.0
28.	Clay	None	TPM/MSK/P&E/1/36A	36.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1740
2.	Total count (Phytobenthos)	50 mg wet sediment	190
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	---	0.8065
5.	Major Species (phytobenthos)	----	*Coscinodiscus, Phycosigma*
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Phychaeta-60,Bivalvia-24
8.	Total no. of species encountered (Fauna)	Nos.	22
9.	Total fauna (Fauna)	per m²	177

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. : BHS/745
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/00105
Sample Description : Sea Sediment
Sampling Location : Dry Bulk Cargo Berth Face
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.12
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2450.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.2
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	17.0
5.	Moisture content	%	Lab Method	30.0
6.	Chloride (as Cl-)	mg/kg	TPM/MSK/P&E/1/10	2029.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	280.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	4.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	12.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	6.9
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2117.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	302.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	2.6
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.9
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.8
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

Ref. No. BBS/348

MSK
TESTING & INSPECTION

Date- 07.10.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	3.1
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	9.4
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.3
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999): Reflm:2014	9.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/T&E/V/68	8.3
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec. 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/T&E/1/36A	46.0
27.	Silt	%	TPM/MSK/T&E/1/36A	30.0
28.	Clay	None	TPM/MSK/P&E/1/36A	24.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1991
2.	Total count (Phytobenthos)	50 mg wet sediment	280
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	---	0.6485
5.	Major Species (phytobenthos)	---	*Navicula, Cocchioleucas,*
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-31,Bivalvia-14
8.	Total no. of species encountered (Fauna)	Nos.	28
9.	Total fauna (Fauna)	per m^2	229

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/346
Date : 01.10.2022
Sample No. : MSKGL/HD/2022-23/09/00106
Sample Description : Sea Sediment
Sampling Location : Liquid/Gas/Cryogenic Berth Face
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Reflm:2011	7.91
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Reflm:2006	3712.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Reflm:2015	2.6
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	40.0
5.	Moisture content	%	Lab Method	25.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1478.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	715.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	3.6
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1634.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	228.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	3.2
15.	Nickel (as Ni)	mg/kg	EPA 6010D	4.7
16.	Zinc (as Zn)	mg/kg	EPA 6010D	9.2
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK TESTING ■ INSPECTION

Ref. No. BBS/346

Date- 01.10.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	8.4
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	4.1
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.6
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); RHm:2014	8.2
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.7
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb.2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	40.0
27.	Silt	%	TPM/MSK/P&E/1/36A	38.0
28.	Clay	None	TPM/MSK/P&E/1/36A	22.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1807
2.	Total count (Phytobenthos)	50 mg wet sediment	247
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity Index (Phytobenthos)	----	0.8750
5.	Major Species (phytobenthos)	----	*Bidulphia, Pleurosigma* ,
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Ptychaeta-62,Bivalvia-24
8.	Total no. of species encountered (Fauna)	Nos.	35
9.	Total fauna (Fauna)	per m^2	350

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/347
Date : 01.10.2022
Sample No. : MSK/OL/ID/2022-23/09/00107
Sample Description : Sea Sediment
Sampling Location : Along Channel at 1 km
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Reffm:2011	8.14
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Reffm:2006	5561.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Reffm:2015	3.9
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	25.0
5.	Moisture content	%	Lab Method	38.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1466.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	680.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	12.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	6.6
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	23.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2902.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	249.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	1.8
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.6
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.9
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BDS/347

Date: 01.10.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	1.5
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	4.6
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	1.5
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	13.8
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	10.6
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	40.0
27.	Silt	%	TPM/MSK/P&E/1/36A	39.0
28.	Clay	None	TPM/MSK/P&E/1/36A	21.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1690
2.	Total count (Phytobenthos)	50 mg wet sediment	220
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity Index (Phytobenthos)	----	0.5680
5.	Major Species (phytobenthos)	----	*Biddulphia, Gyrosigma*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-59,Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	16
9.	Total fauna (Fauna)	per m^2	240

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/348
Date : 01.10.2022
Sample No. : MSK/GL/ID/2022-23/09/0010R
Sample Description : Sea Sediment
Sampling Location : Along Channel at 5 km
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	8.04
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14) 1984;Rffm:2006	3845.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	3.7
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	59.0
5.	Moisture content	%	Lab Method	34.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	751.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	494.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.7
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	17.1
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	3334.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	228.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	1.4
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.2
16.	Zinc (as Zn)	mg/kg	EPA 6010D	16.7
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. RR9/348

Date- 01.10.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.6
19.	Boron (as B)	mg/kg	IS 17428- 2005,Annex H	2.1
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	3.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999), Reffm:2014	10.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	7.2
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8081	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	44.0
27.	Silt	%	TPM/MSK/P&E/1/36A	36.0
28.	Clay	None	TPM/MSK/P&E/1/36A	20.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1991
2.	Total count (Phytobenthos)	50 mg wet sediment	270
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	1.6831
5.	Major Species (phytobenthos)	----	*Navicula,Cyrostigma*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-60,Bivalvia-30
8.	Total no. of species encountered (Fauna)	Nos.	58
9.	Total fauna (Fauna)	per m^2	180

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. : BES/349
Date : 01.10.2022
Sample No. : MSKGL/ED/2022-23/09/00109
Sample Description : Sea Sediment
Sampling Location : Along Channel at 10 km
Date of sampling : 18.09.2022

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	4825.0
3.	Organic Matter	%	IS 2720 (Part 33) 1972; Rffm:2015	6.3
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	41.0
5.	Moisture content	%	Lab Method	33.0
6	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1927.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	420.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	14.1
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2425.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	1654.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	3.2
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.9
16.	Zinc (as Zn)	mg/kg	EPA 6010D	16.0
17	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK TESTING INSPECTION

Ref. No. RRS/449

Date- 01.10.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.8
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	4.2
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	5.3
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	11.6
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	7.2
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	48.0
27.	Silt	%	TPM/MSK/P&E/1/36A	28.0
28.	Clay	None	TPM/MSK/P&E/1/36A	24.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/µ dry wt.	1897
2.	Total count (Phytobenthos)	50 mg wet sediment	260
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	----	1.9229
5.	Major Species (phytobenthos)	----	*Synedra, Cocclnodiscus sp.*
6.	Name of Phylum (Fauna)	----	Anthropoda, Annelida
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-70,Bivalvia-38
8.	Total no. of species encountered (Fauna)	Nos.	48
9.	Total fauna (Fauna)	per m^2	259

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. : DHS/150
Date : 01.10.2022
Sample No. : MSKCL/ED/2022-23/09/00110
Sample Description : Sea Sediment
Sampling Location : Near Kanika Island
Date of sampling : 18.09.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26) 1987;Rffm:2011	7.80
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14) 1984;Rffm:2006	3270.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	4.9
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	14.0
5.	Moisture content	%	Lab Method	21.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	547.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	2380.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	7.4
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	3525.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	308.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	4.9
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.6
16.	Zinc (as Zn)	mg/kg	EPA 6010D	6.4
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

MSK TESTING & INSPECTION

Ref. No. BBS/350 **Date- 01.10.2022**

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.5
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	3.8
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	5.1
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rtfm:2014	9.2
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	4.1
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 D - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	40.0
27.	Silt	%	TPM/MSK/P&E/1/36A	28.0
28.	Clay	None	TPM/MSK/P&E/1/36A	32.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1745
2.	Total count (Phytobenthos)	50 mg wet sediment	280
3.	No of species (Phytobenthos)	Nos	12
4.	Diversity index (Phytobenthos)	----	1.7505
5.	Major Species (phytobenthos)	----	*Bidulphia,Navicula*
6.	Name of Phylum (Fauna)	----	Arthropoda, Annelida
7.	Class & Number of individuals encountered (Fauna)	----	Malugastracu-32,Pelecypoda-14
8.	Total no. of species encountered (Fauna)	Nos.	38
9.	Total fauna (Fauna)	per m^2	352

Report Prepared by.

For Mitra S.K. Private Limited

Authorized Signatory

MSK TESTING & INSPECTION

Ref: MSKGL/ED/BHU-2022/00500

Date: 01.10.2022

Site Specific Monitored Meteorological Data

For : The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha

Sr. No.	Parameters		September.22
1.	Temperature (°C)	Minimum	25.9
		Maximum	36.2
		Average	29.3
2.	Relative Humidity (%)	Minimum	42.6
		Maximum	100.0
		Average	75.2
3.	Wind Speed (m/s)	Minimum	0.0
		Maximum	15.8
		Average	13.6
4.	Wind Direction (%)	N	7.4
		NNE	6.2
		NE	19.7
		ENE	4.5
		E	6.3
		ESE	6.82
		SE	5.4
		SSE	6.8
		S	5.78
		SSW	7.45
		SW	6.78
		WSW	3.15
		W	8.4
		WNW	2.3
		CALM	4.03
5.	Rainfall (mm)	Total	177.4
		Minimum Day Wise	0.0
		Maximum Day Wise	13.4
		Average	0.24
6.	Ambient Pressure (mm Hg)	Minimum	747.8
		Maximum	758.7
		Average	751.7

(Source – Site Specific Data)

Prepared By

Verified By

MONTHLY ENVIRONMENT MONITORING REPORT

AUGUST- 2022

OF

adani

Ports and Logistics

THE DHAMRA PORT COMPANY LIMITED

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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Report No: RKS/601A

Date: 01.09.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Bhuvaga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/02000
Type of Sample	Ambient Air Sample
Sampling Location	Colony Area
Sampling Done by	Mr. Soumya Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lab 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_2 ($\mu g/m^3$)	CO (mg/m^3)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Pb ($\mu g/m^3$)	Ni ($\mu g/m^3$)	As (ng/m^3)	C_6H_6 ($\mu g/m^3$)	BaP (ng/m^3)
03.08.2022	35.40	22.10	7.50	22.40	0.67	20.00	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.08.2022	30.70	18.60	6.80	23.60	0.58	18.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.08.2022	38.70	24.80	6.40	20.30	0.47	12.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.08.2022	42.10	21.90	7.70	17.40	0.75	15.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.08.2022	38.70	24.70	6.10	12.80	0.44	17.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.08.2022	31.60	27.30	6.90	22.70	0.52	21.00	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.08.2022	42.30	20.10	7.20	18.70	0.48	12.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.08.2022	44.40	21.20	6.70	22.90	0.41	20.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
31.08.2022	47.70	24.50	7.70	22.50	0.30	18.00	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	46.01	23.67	6.94	21.09	0.56	17.23	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi NAAQ 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. 2017	IS 5182: Part 6:2006 (Reaff. 2017)	IS 5182: Part 10:1999 (Reaff.2010)	IS 5182: Part 25:2018	IS 5182: Part 09:1974	EPA-IO3.4Jan.1999	EPA-IO3.4Jan.1999	EPA-IO3.4Jan.1999	IS:5182(Part-17):2006 Reaff.2015	IS:5182(Part-12):2004 Reaff.: 2014

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

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MSK
TRUST IN QUALITY INSPECTION

Report No: KKS/01TK **Date: 01.09.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dasloga, Bhadrak, Odisha**
Work Order No.	**4502017684**
Reference No.	**MSKOL/EO/2022-23/02000**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Kanak Prasad Village**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**
Sampling Duration	**24hrs**
Monitoring Instrument	**KDS (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)
03.08.2022	49.30	21.50	7.10	21.30	0.67	21.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.08.2022	52.30	22.80	6.50	22.40	0.59	19.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.08.2022	47.20	21.50	6.20	21.40	0.65	16.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.08.2022	55.30	27.60	6.80	22.80	0.63	12.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.08.2022	57.80	29.40	6.40	19.60	0.78	11.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.08.2022	50.10	24.20	6.00	23.40	0.45	19.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.08.2022	45.70	22.10	6.70	20.70	0.50	12.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
31.08.2022	40.90	20.50	7.40	18.20	0.72	15.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
31.08.2022	46.50	24.80	7.60	22.30	0.66	18.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**49.91**	**23.93**	**6.84**	**21.48**	**0.60**	**16.67**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi NAAQ 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 Gazette Notification

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MSK TESTING & INSPECTION

Report No: BBS/602C

Date: 01.09.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4800217681**
Reference No.	**MSKGL/ED/2022-23/02000**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near DMH**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**
Sampling Duration	**24hrs**
Monitoring Instrument	**RDS (APM 860), HVS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler**

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (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)
03.08.2022	60.30	32.40	7.50	30.50	0.69	22.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.08.2022	58.70	40.30	6.80	27.70	0.52	21.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.08.2022	50.40	26.20	7.10	30.30	0.47	17.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.08.2022	51.40	28.90	7.00	33.60	0.58	26.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.08.2022	52.80	25.70	6.80	34.70	0.40	20.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.08.2022	47.40	23.50	6.40	23.60	0.71	23.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
26.08.2022	52.10	25.70	6.70	24.70	0.64	27.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.08.2022	55.80	26.80	6.90	20.10	0.42	18.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
31.08.2022	56.10	28.00	7.00	27.80	0.50	24.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**54.18**	**27.65**	**6.80**	**24.83**	**0.56**	**22.22**	**<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 23:2018 (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 - IO3.1Jun.1999**	**EPA - IO3.1Jun.1999**	**EPA - IO3.1Jun.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
TEST | IND | INSPECTION

Report No: KBS/6050

Date: 01.09.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	4800017684
Reference No.	MSKCGL/T.D/2022-23/02000
Type of Sample	Ambient Air Sample
Sampling Location	Naar Jetty
Sampling Done by	**Mr. Soumya Ranjan Ghadai**
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)
03.08.2022	62.40	31.80	7.80	28.80	0.71	30.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.08.2022	55.10	28.70	8.40	26.70	0.68	20.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.08.2022	58.90	30.40	8.10	27.10	0.54	22.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.08.2022	52.30	26.50	7.10	23.60	0.48	23.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.08.2022	53.70	28.70	6.90	24.20	0.67	19.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.08.2022	60.10	30.40	7.80	28.10	0.52	26.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.08.2022	57.40	26.80	7.50	20.80	0.61	19.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.08.2022	62.70	30.70	7.00	23.90	0.70	17.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
31.08.2022	59.40	28.60	6.80	20.60	0.57	22.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**58.38**	**29.14**	**7.62**	**25.51**	**0.61**	**23.64**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<4.2**	**<0.5**
CPCB, New Delhi NAAQ Standard	**100**	**60**	**60**	**60**	**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 - IOA-1 June, 1999	EPA - IOA-1 June, 1999	EPA - IOA-1 June, 1999	IS:5183 (Part-11):2006 Reaff. 2012	IS:5183 (Part 12):2004 Reaff.: 2014

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

Prepared By

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MSK
TESTING & INSPECTION

Report No: BBS/004E **Date: 01.09.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/02000
Type of Sample	Ambient Air Sample
Sampling Location	**Dosinga Village**
Sampling Done by	Mr. Soumya Ranjan Ghadai
Sampling Duration	**24hrs**
Monitoring Instrument	RDS (APM 460), FPS (APM 164) 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)
04.08.2022	49.80	25.80	6.70	21.40	0.70	16.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
07.08.2022	40.30	21.50	6.90	18.30	0.54	17.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.08.2022	52.70	27.90	7.10	26.20	0.59	16.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.08.2022	44.30	23.40	6.30	19.80	0.45	17.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.08.2022	50.60	27.80	6.60	24.30	0.49	21.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.08.2022	47.70	24.70	6.80	20.90	0.57	16.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.08.2022	38.10	20.60	7.30	16.10	0.77	20.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
30.08.2022	41.20	20.00	6.20	14.70	0.61	17.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
31.08.2022	46.80	25.70	7.50	18.10	0.40	17.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	47.55	24.91	6.87	20.03	0.56	17.72	<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 23:2019 (Reaffirm. 2012)	IS 5182: Part 24:2019	IS 5182 : Part 2 :2001 (Reaffirm.2012)	IS 5182 : Part 6 :2006 (Reaffirm.2012)	IS 5182 : Part 10 :1999 (Reaffirm.2014)	IS 5182: Part 25:2019	IS 5182: Part 09:1974	EPA - IO3.4 June, 1999	EPA - IO3.4June,1999	EPA - IO3.4June,1999	IS:5182 (Part-11):2006 Reaffirm.2012	IS:5182 (Part-12):2004 Reaffirm.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/605F

Date: 01.09.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Bogingo, Bhadrak, Odisha
Work Order No.	4800217684
Reference No.	MSK/GL/ED/2022-23/02000
Type of Sample	Ambient Air Sample
Sampling Location	Near Bhitarkanika
Sampling Done by	Mr. Soumya Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), TPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	As (ng/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
03.08.2022	48.80	26.30	6.80	22.40	0.40	15.60	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
07.08.2022	40.10	22.50	7.60	18.90	0.58	14.70	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
14.08.2022	46.90	24.50	7.10	21.30	0.62	17.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.08.2022	44.10	20.80	6.40	17.50	0.50	13.20	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
21.08.2022	42.30	22.90	6.90	23.60	0.47	22.90	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
24.08.2022	47.60	25.70	7.30	20.10	0.67	17.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.08.2022	44.10	22.60	6.10	21.00	0.71	22.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
28.08.2022	50.90	24.20	6.70	20.00	0.49	21.70	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
31.08.2022	41.70	21.60	7.00	22.80	0.55	20.50	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
Monthly Average	45.78	23.39	6.91	21.50	0.56	18.75	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
CPCB, New Delhi NAAQ Standard	100	60	80	80	4	400	100	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 24:2006 (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.2017	IS-5182 (Part 12):2006 & Reaff.2014

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

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/605
Date : 01.09.2022
Sample No. : MSKOL/ED/2022-23/08/01780
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day Leq. Time dB(A)		Night Time Leq. dB(A)	
			Results	LIMIT	Results	LIMIT
1.	22.08.2022	Colony Area (R)	48.7	55	39.2	45
2.	23.08.2022	Kanak Prasad Village (R)	45.1	55	38.1	45
3.	06.08.2022	Near HM11 (I)	58.2	75	45.7	70
4.	08.08.2022	Near Jetty (I)	60.3	75	47.6	70
5.	09.08.2022	Dosinga Village (R)	43.3	55	37.8	45
6.	17.08.2022	Near Bhitarkanika (Eco Sensitive Zone)	40.1	50	36.4	40

Noise Limit as per CPCB

Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time	
Industrial Area	75	70	NOTE : 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	

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 : DORINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : DDS/606
Date : 01.09.2022
Sample No. : MSKGL/EIV/2022-23/08/01998
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg. dB(A)
1.	18.08.2022	Stock Yard	70.6	41.3	66.4
2.	04.08.2022	Wagon Tippler	78.5	49.5	75.2
3.	07.08.2022	Near Silo	65.5	38.3	64.8
4.	24.08.2022	Near Stacker & Reclaimer	75.2	45.7	68.1
5.	25.08.2022	Project Area	83.8	49.1	76.2
6.	14.08.2022	Transfer Point	85.7	53.8	81.6
7.	15.08.2022	Workshop	77.4	43.5	70.9
8.	16.08.2022	Steel Yard	86.1	55.7	83.6
9.	17.08.2022	FCC Shed	69.8	44.3	67.5
10.	21.08.2022	Near Port Canteen	63.5	38.7	62.6

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

Continuation Sheet

MSK
TESTING&INSPECTION

Ref : MSKGL/FD/2022/33/01500

Date : 01.09.2022

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017834
Reference No.	MSKGL/FD/2022/33/01500
Type of Sample	Piezometric Well
Sampling Done by	Mr. Soumya Ranjan Ghadai

GROUND WATER LEVEL MONITORING REPORT

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	16.08.2022	11.12
2	Near WTP	16.08.2022	12.50

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 : DOSINGHA, PO : DHAMRA
DIST : BHADRAK, 756171 ODISHA

Report No. : RR8/610
Date : 01.09.2022
Sample No. : MSKGL/FD/2022-23/08/01200
Date of sampling : 16.08.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Soumya Ranjan Ghosh

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 25° C)		6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rflm: 2012	7.77
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rflm: 2014	11.8
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rflm: 2014	42.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rflm: 2014	BDL(DL:0.0005)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Rflm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rflm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rflm: 2012	BDL(DL:1.0)
13.	Odour	—	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rflm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rflm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)-1986 Rflm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rflm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rflm: 2014	110.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rflm:2012	410.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rflm: 2009	172.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46) 1994 Rflm: 2014	28.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21) 2014	179.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.5)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rflm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 4079 (Part 43)- 1992; Rflm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----		IS 3025 (Part 14) 2013	42.0

Continuation Sheet

MSK
TESTING & INSPECTION

Ref. No. BBS/410

Date:- 01.09.2022

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rflm: 2014	BDL(DL:0.05)
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 Edn.) 6440B	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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MSK
EXCELLENCE IN INSPECTIONS

TEST REPORT

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

Report No. : R/65/611
Date : 01.09.2022
Sample No. : MSK/H/FD/2022-23/08/01361
Date of sampling : 16.08.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Soumya Ranjan Hembrom

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Unity	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	Unity	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 Reffm: 2012	7.89
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Reffm: 2014	63.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Reffm: 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:0.001)
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 Reffm: 2014	BDL(DL:0.0005)
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 Reffm: 2014	BDL(DL:0.3)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Reffm: 2014	BDL(DL:0.2)
12.	Colour	Hazen	5	15	IS 3025 (Part 4)-1983: Reffm:2012	BDL(DL:1.0)
13.	Odour	—	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Reffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Reffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Reffm: 2014	BDL(DL:0.03)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Reffm: 2014	147.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984: Reffm:2012	408.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23) 1986 Reffm: 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 Reffm: 2014	25.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	175.0
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 Reffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992: Reffm: 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.	Nickel	mg/l	—	—	IS 3025 (Part 14)- 2013	44.0

Continuation Sheet

MSK TESTING&INSPECTION

Ref. No. [illegible]

Date- 01.09.2022

32.	Sulphide (as H2S)	mg/l	0.03	No Relaxation	IS 3025 (Part 29)- 1991; Reffm: 2014	BDL(DL:0.05)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Reffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Reffm: 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 Reffm: 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 (20th Edn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	USEPA 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. : BRS/612
Date : 01.09.2022
Sample No. : MSKGL/TD/2022-23/08/01302
Date of sampling : 16.08.2022
Sampling Description : Cleaned Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 27° C)	----	6.5 – 8.5	No Relaxation	IS 3025 (Part 11)-1984 Reffm: 2012	7.55
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Reffm: 2014	30.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Reffm: 2014	41.0
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:0.05)
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 Reffm: 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 Reffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60): 2008 Reffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4) 1983; Reffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Reffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Reffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Reffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Reffm: 2014	107.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16) 1984; Reffm:2012	306.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Reffm:2009	148.0
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 Reffm: 2014	22.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21) 2018	182.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.5)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Reffm: 2014	BDL(DL:0.5)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Reffm: 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:0.0003)
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	49.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. RBS/612

Date- 01.09.2023

32.	Sulphide (as H2S)	mg/l	0.02	No Relaxation	IS 4029 (Part 29)- 1995; Reflm. 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988, Reflm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 4029 (Part 26)- 1986, Reflm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2009 R.A 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Reflm 2014	BDL(DL:0.01)
37.	Anionic Detergent (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.) 6408	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCBs)	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 : BOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BRS/601
Date : 01.09.2022
Sample No. : MSKGI/ED/2022-23/08/01147
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 06.08.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.99	7.37
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	92.0	5.6
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	220.0	16.2
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	6.7	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	16.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reffm:2014	21.0	1.8
11.	Fecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1200.0	94.0

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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 : DOSINGIA, PO : DHAMKA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BES/603
Date : 01.09.2022
Sample No. : MSKCCL/DD/2022-23/08/01993
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 20.08.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23rd Edition) 4500 H-B	6.98	7.22
4	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	50.0	10.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	65.0	6.4
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	198.0	20.8
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	6.1	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	17.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reflm.2014	24.0	2.3
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1300.0	79.0

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
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DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/613
Date : 01.09.2022
Sample No. : MSKGL/ED/2022-23/08/01149
Sample Description : EFFLUENT WATER
Sampling Location : STP 30KLD
Date of sampling: : 06.08.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	—	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
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	7.51
4.	Appearance	—	—	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	114.0	16.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	130.0	4.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	310.0	11.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	8.7	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	14.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999), Reffm 2014	27.0	2.4
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1900.0	150.0

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/614
Date : 01.09.2022
Sample No. : MSKGL/ED/2022-23/08/01993
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 20.08.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 28°C	---	6.5 – 9.0	APHA (23rd Edition) 4500 H.B	7.24	7.39
4	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	90.0	8.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	76.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	241.0	6.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	5.7	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3 F 2017	32.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	42.0	1.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2500.0	98.0

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
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BRS/607
Date : 01.09.2022
Sample No. : MSKGL/HO/2022-23/08/01151
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 06.08.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120D 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.84	7.34
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	42.0	8.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	80.0	6.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	198.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	5.1	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	19.7	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfm:2014	28.8	1.9
11.	Fecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2100.0	220.0

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
DIST : BHADRAK, PIN 756171 ODISHA

Report No. : BBS/604
Date : 01.09.2022
Sample No. : MNKGL/ED/2022-23/08/01997
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 20.08.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H+B	6.97	7.31
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	137.0	4.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	30.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	121.0	8.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	2.1	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500 NH3 F 2017	12.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); RHm:2014	27.0	2.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	800.0	108.0

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 : DOSINGIA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : RRS/607
Date : 01.09.2022
Sample No. : MSKGL/ED/2022-23/08/01153
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 06.08.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.72	7.15
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	84.0	10.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	96.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	260.0	6.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	9.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	27.2	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	10.6	1.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2500.0	90.0

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. : BB5/608
Date : 01.09.2022
Sample No. : MSKGL/ED/2022-23/08/01909
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 20.08.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150D	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.74	7.77
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	180.0	16.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	110.0	7.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	398.0	20.0
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	41.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rtfm:2014	32.0	2.0
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1800.0	80.0

Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

N-6/100, Ground Floor
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[CIN: U51202WB1988PTC023037]

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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. : RES/612
Date : 01.09.2022
Sample No. : MSKOL/ELV/2022-23/08/00715
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 07.08.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Reffm:2011	7.87
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14) 1984;Reffm:2006	3669.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Reffm:2015	0.67
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	254.0
5.	Moisture content	%	Lab Method	12.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2019.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977;RA 2015	488.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	15.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	297.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	244.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1678.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	527.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	19.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	12.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	13.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	301.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. BBS/615 Date- 01.09.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	6.1
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex II	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1547.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	22.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	410.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	360.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 D - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	35.0
27.	Silt	%	TPM/MSK/P&E/1/36A	39.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	27.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1350
2.	Total count (Phytobenthos)	50 mg wet sediment	260
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	1.88
5.	Major Species (phytobenthos)	---	*Biddulphia mobiliensis, Navicula clostarium*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Phylum- 49,Bivalvia-20
8.	Total no. of species encountered (Fauna)	Nos.	18
9.	Total fauna (Fauna)	per m^3	156

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. : RB3/616
Date : 01.09.2022
Sample No. : MSKGL/ED/2022-23/08/00716
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 07.08.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.40
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	4443.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.87
4.	Turbidity	N.T.U	APHA (21st Edition) 2130B	279.0
5.	Moisture content	%	Lab Method	35.9
6.	Chloride (as Cl⁻)	mg/kg	TPM/MSK/P&E/1/10	2874.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	558.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/13	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	160.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	69.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	3277.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	442.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	10.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	12.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	22.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	417.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BBS/616

Date- 01.09.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	6.1
19	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<2.0
20.	Aluminum (as Al)	mg/kg	EPA 6010D	4234.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	21.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reffm2014	449.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/08	462.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	48.0
27.	Silt	%	TPM/MSK/P&E/1/36A	32.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	30.0

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1455
2.	Total count (Phytobenthos)	50 mg wet sediment	280
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	---	1.74
5.	Major Species (phytobenthos)	---	*Biddulphia mobiliensis, Navicha distans*
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-50,Bivalvia-11
8.	Total no. of species encountered (Fauna)	Nos.	12
9.	Total fauna (Fauna)	per m^3	177

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. : BHS/617
Date : 01.09.2022
Sample No. : MSKGL/ED/2022-23/08/00500
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 31.08.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.77
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3891.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; RffM:2015	0.66
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130D	274.0
5.	Moisture content	%	Lab Method	32.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	3678.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	390.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/11	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	7.8
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	109.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	10.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	3122.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	530.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	16.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	20.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	24.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	350.0

MSK TESTING & INSPECTION

Ref. No. BBS/617 Date: 01.09.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	10.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<3.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	9997.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	32.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	430.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/63	301.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<1.0
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	42.0
27.	Silt	%	TPM/MSK/P&E/1/36A	36.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	22.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1440
2.	Total count (Phytobenthos)	50 mg wet sediment	266
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	----	1.90
5.	Major Species (phytobenthos)	----	*Biddulphia mobiliensis, Spirulina oceaginea*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta 80,Bivalvia 25
8.	Total no. of species encountered (Fauna)	Nos.	30
9.	Total fauna (Fauna)	per m²	277

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: DORINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BDS/618
Date : 01.08.2022
Sample No. : MSKGL/BD/2022-23/0500501
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 31.08.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rflm:2011	8.22
2.	Electrical Conductivity	µS/cm	IS 3025 (Part 14)-1984;Rflm:2006	2110.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rflm:2015	3.6
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	252
5.	Moisture content	%	Lab Method	31.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/T&E/1/10	2600.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	452.6
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/13	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/13	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/13	149.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	310.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/T&E/1/4	1289.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	197.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	19.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	16.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	24.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	180.0

Continuation Sheet

MSK
TESTING & INSPECTION

Ref. No. BBS/618

Date- 01.09.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	11.4
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1600.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	15.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reffm 2011	201.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/2/68	180.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	30.0
27.	Silt	%	TPM/MSK/P&E/1/36A	46.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	24.0

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1512
2.	Total count (Phytobenthos)	50 mg wet sediment	290
3.	No of species (Phytobenthos)	Nos.	9
4.	Diversity Index (Phytobenthos)	----	1.30
5.	Major Species (phytobenthos)	----	*Gymnodinia sp., Navicula dorsata*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaata-66,Bivalvia-19
8.	Total no. of species encountered (Fauna)	Nos.	12
9.	Total fauna (Fauna)	per m^2	196

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

MSK TESTING & INSPECTION

Ref: MSKCL/ED/BHU-2022/02000

Date: 01.09.2022

Site Specific Monitored Meteorological Data

For : The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha

Sr. No.	Parameters		August.22
1.	Temperature (°C)	Minimum	24.4
		Maximum	37.7
		Average	29.8
2.	Relative Humidity (%)	Minimum	37.6
		Maximum	94.7
		Average	70.1
3.	Wind Speed (m/s)	Minimum	0.0
		Maximum	15.0
		Average	3.3
4.	Wind Direction (%)	N	9.7
		NNE	22.3
		NE	6.5
		ENE	1.9
		E	1.45
		ESE	6.61
		SE	3.85
		SSE	6.89
		S	7.88
		SSW	6.55
		SW	5.22
		WSW	4.17
		W	7.88
		WNW	8.9
		CALM	3.76
5.	Rainfall (mm)	Total	365.2
		Minimum Day Wise	0.0
		Maximum Day Wise	14.5
		Average	0.48
6.	Ambient Pressure (mm Hg)	Minimum	747.8
		Maximum	748.7
		Average	751.9

(Source – Site Specific Data)

Prepared By

Validated By

MONTHLY ENVIRONMENT MONITORING REPORT
JULY- 2022

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: DDS/501A **Date: 01.08.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4802006150**
Reference No.	**MSKGL/ED/2022-23/03500**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Colony Area**
Sampling Done by	**Mr. Suparna Ranjan Ghadai**
Sampling Duration	**24hrs**
Monitoring Instrument	**RDS (APM 260), PPS (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)
03.07.2022	43.80	22.20	6.80	20.40	0.61	21.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.07.2022	48.90	24.50	7.40	23.20	0.59	19.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.07.2022	42.90	22.40	6.10	20.60	0.71	21.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.07.2022	50.70	25.20	6.20	22.80	0.68	20.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.07.2022	41.10	22.70	6.70	20.40	0.70	20.00	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.07.2022	46.40	22.30	7.90	21.20	0.59	15.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.07.2022	48.40	22.10	6.30	17.70	0.54	14.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.07.2022	50.70	24.80	7.90	19.40	0.48	17.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
31.07.2022	52.50	26.20	7.50	14.70	0.65	12.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**47.34**	**23.61**	**7.00**	**20.01**	**0.62**	**17.92**	**<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 9:1974	EPA - IUM.Limon,1999	EPA - IUM.Limon,1999	EPA IUM.Limon,1999	IS:5182(Part-11):2006 Reaff.2012	IS:5182(Part-17):2004 Reaff.: 2014

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

Prepared By

Checked By

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MSK
TESTING & INSPECTION

Report No: KRS/302B

Date: 01.08.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800006186
Reference No.	MSKGL/EID/2022/24/03400
Type of Sample	Ambient Air Sample
Sampling Location	Kunak Prawel Village
Sampling Done by	Mr. Soumya Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 850), FPS (APM 430) 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)
03.07.2022	46.40	21.60	6.10	22.40	0.65	21.70	<20.0	<0.01	<5.0	<1.0	<4.7	<0.3
06.07.2022	40.40	25.40	7.80	20.80	0.78	18.40	<20.0	<0.01	<5.0	<1.0	<4.7	<0.3
10.07.2022	48.10	21.20	7.60	20.10	0.91	14.70	<20.0	<0.01	<5.0	<1.0	<4.7	<0.3
13.07.2022	51.80	25.60	7.50	22.70	0.56	18.40	<20.0	<0.01	<5.0	<1.0	<4.7	<0.3
17.07.2022	41.40	22.10	6.40	18.50	0.70	12.30	<20.0	<0.01	<5.0	<1.0	<4.7	<0.3
20.07.2022	42.70	22.70	6.60	18.70	0.72	20.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.3
24.07.2022	46.10	23.20	7.70	21.60	0.59	17.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.3
27.07.2022	51.70	23.30	7.10	18.80	0.47	13.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.3
31.07.2022	55.10	27.80	6.40	23.20	0.62	20.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.3
Monthly Average	48.02	24.06	6.95	20.48	0.67	17.73	<20.0	<0.01	<5.0	<1.0	<4.5	<0.3
CPCB, New Delhi NAAQ 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. 2017)	IS 5182: Part 24:2019	IS 5182: Part 2 (2001) (Reaff. 2017)	IS 5182: Part 6 (2006) (Reaff. 2012)	IS 5182: Part 10 (2000) (Reaff.2014)	IS 5182: Part 25:2018	IS 5182: Part 09:1974	EPA 10B.47 nov.1999	EPA - IO3.4 Inc.2000	EPA - IO3.4 Inc.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 Gen. Notification

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MSK
TESTING & INSPECTION

Report No: BB8/503C **Date: 01.08.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	4802000618G
Reference No.	MSKGL/EH/2022 AA/03500
Type of Sample	Ambient Air Sample
Sampling Location	Near RMH
Sampling Done by	Mr. Soumya Ranjan Chorfai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 850), FPS (APM 151) Lara Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (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)
03.07.2022	54.40	26.60	8.80	21.20	0.71	25.10	<20.0	<0.01	<5.0	<1.0	<1.0	<0.5
06.07.2022	58.80	28.40	9.70	26.60	0.51	23.70	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
10.07.2022	57.60	26.70	7.60	24.50	0.44	20.80	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
13.07.2022	54.20	28.70	8.40	21.20	0.93	27.70	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
17.07.2022	60.00	28.40	8.70	25.50	0.66	26.70	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
20.07.2022	58.40	26.90	6.90	22.40	0.78	22.30	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
24.07.2022	58.80	28.70	7.10	24.30	0.57	24.40	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
27.07.2022	52.00	25.50	7.60	22.30	0.61	16.30	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
31.07.2022	54.50	25.40	8.80	20.60	0.49	14.20	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
Monthly Average	**55.80**	**27.30**	**7.88**	**24.42**	**0.63**	**22.35**	**<20.0**	**<0.01**	**<5.0**	**<1.0**	**<1.2**	**<0.5**
CPCB, New Delhi NAAQ 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 2017)**	**IS 5182 : Part 10 :1999 (Reaff 2014)**	**IS 5182: Part 25:2018**	**IS 5182: Part 09:1974**	**EPA - 103.4 June, 1999**	**EPA - IO3.4In ne,1999**	**EPA - IO3.4In ne,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 Ind. Notification

Prepared By

Checked By-

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Report No: BBS/504D **Date: 01.08.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**
Work Order No.	**4802006186**
Reference No.	**MSKCL/R13/2022/2404400**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near Jetty**
Sampling Done by	**Mr. Soumya Ranjan Ghadai**
Sampling Duration	**24hrs**
Monitoring Instrument	**RDS (APM 850), 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_2 (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)
03.07.2022	55.80	28.10	7.40	26.60	0.64	24.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.07.2022	60.60	30.70	8.70	24.10	0.75	26.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.07.2022	36.40	28.70	8.10	31.50	0.50	28.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.07.2022	34.80	26.70	7.80	33.70	0.60	22.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.07.2022	50.60	24.30	6.70	33.70	0.86	27.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.07.2022	34.30	27.40	8.60	33.30	0.45	22.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.07.2022	37.40	26.60	7.50	23.00	0.49	26.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.07.2022	54.60	26.10	6.40	24.50	0.77	24.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
31.07.2022	62.50	30.30	6.10	28.50	0.60	26.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	**56.69**	**27.59**	**7.43**	**24.39**	**0.66**	**26.84**	**<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 26:2018**	**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
TEST NC INSPECTION

Report No: KKS/008K

Date: 01.08.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802006186
Reference No.	MSKGH/ED/2022-23/03500
Type of Sample	Ambient Air Sample
Sampling Location	Dosinga Village
Sampling Done by	Mr. Soumya Ranjan Ghadai
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)
05.07.2022	22.20	20.50	6.90	21.40	0.67	20.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.07.2022	23.20	22.60	7.40	22.10	0.72	19.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.07.2022	19.80	20.30	7.10	17.40	0.46	17.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
14.07.2022	16.70	24.70	6.50	20.80	0.70	18.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.07.2022	18.70	24.60	6.10	22.30	0.63	21.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.07.2022	12.30	20.70	7.90	19.40	0.57	24.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.07.2022	13.20	22.10	7.40	21.80	0.52	22.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.07.2022	16.60	26.10	6.20	18.60	0.48	24.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
31.07.2022	18.30	24.10	6.40	20.30	0.40	22.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	15.19	22.69	6.90	20.48	0.58	20.89	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi NAAQ 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 26:2018	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 Govt. Notification

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MSK TESTING & INSPECTION

Report No: RR9/406F

Date: 01.08.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dostuga, Bhadrak, Odisha**
Work Order No.	4800206186
Reference No.	MSKGL/ED/2022-23/02200
Type of Sample	Ambient Air Sample
Sampling Location	Near Bhitarkanika
Sampling Done by	Mr. Soumya Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 880), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETER											
	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)
03.07.2022	42.70	21.40	6.79	18.40	0.41	14.40	<20.0	<0.01	<5.0	<1.0	<24.7	<0.5
06.07.2022	40.20	20.50	7.40	20.40	0.39	16.10	<20.0	<0.01	<5.0	<1.0	<24.7	<0.5
10.07.2022	45.70	23.50	6.10	22.30	0.67	18.70	<20.0	<0.01	<5.0	<1.0	<24.7	<0.5
14.07.2022	44.70	21.40	6.60	20.10	0.61	16.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.07.2022	41.60	21.10	6.70	22.70	0.74	14.50	<20.0	<0.01	<5.0	<1.0	<24.7	<0.5
20.07.2022	44.80	22.20	6.10	18.80	0.77	17.70	<20.0	<0.01	<5.0	<1.0	<24.7	<0.5
24.07.2022	40.20	20.50	6.90	22.60	0.71	19.70	<20.0	<0.01	<5.0	<1.0	<24.7	<0.5
27.07.2022	44.10	21.60	6.30	20.80	0.70	17.60	<20.0	<0.01	<5.0	<1.0	<24.7	<0.5
31.07.2022	47.20	24.20	7.10	22.70	0.65	14.80	<20.0	<0.01	<5.0	<1.0	<24.7	<0.5
Monthly Average	43.43	21.87	6.66	21.07	0.59	15.99	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi NAAQ 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 26:2018	IS 5182: Part 09:1974	EPA - IO3.4 June, 1999	EPA - IO3.4June,1999	EPA - IO3.4June,1999	IS:5182 (Part-13):2006 (Reaff.2012	IS:5182 (Part-13):2006 (Reaff.: 2014

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

Prepared By

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MSK
TEST | 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/505
Date : 01.08.2022
Sample No. : MSK GL/ED/2022-23/07/01780
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day Leq. Time dB(A)		Night Time Leq. dB(A)	
			Results	LIMIT	Results	LIMIT
1.	02.07.2022	Colony Area (R)	50.4	55	41.6	45
2.	04.07.2022	Kunak Prasad Village (R)	42.3	55	39.1	45
3.	05.07.2022	Near BMH (I)	66.8	75	50.9	70
4.	09.07.2022	Near Jetty (I)	72.6	75	60.5	70
5.	11.07.2022	Dosinga Village (R)	49.8	55	38.4	45
6.	31.07.2022	Near Bhitarkanika (Eco Sensitive Zone)	45.2	50	36.8	40

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

Report Prepared by:

For Mitra S. K. Private Limited

Authorised 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/506
Date : 01.08.2022
Sample No. : MSKGL/ED/2022-23/07/02010
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg. dB(A)
1.	05.07.2022	Stack Yard	78.4	40.8	69.6
2.	25.07.2022	Wagon Tippler	82.8	51.4	79.9
3.	07.07.2022	Near Silo	70.4	39.1	67.2
4.	10.07.2022	Near Stacker & Reclaimer	72.7	42.8	66.3
5.	13.07.2022	Project Area	80.1	46.4	72.8
6.	14.07.2022	Transfer Point	85.7	53.8	81.6
7.	16.07.2022	Workshop	82.4	48.3	74.5
8.	17.07.2022	Steel Yard	87.8	57.5	85.2
9.	18.07.2022	FCC Shed	76.1	47.2	71.8
10.	19.07.2022	Near Port Canteen	73.7	41.8	67.7

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/2022-23/01316

Date : 01.08.2022

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802006136
Reference No.	MSKGL/FD/2022-23/01316
Type of Sample	Piezometric Well
Sampling Done by	Mr. Soumya Ranjan Ghadai

GROUND WATER LEVEL MONITORING REPORT

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	13.07.2022	9.74
2	Near WTP	15.07.2022	12.99

Report Prepared by:

For Mitra S. K. Private Limited,

Authorized Signatory

Mitra S. K. Private Limited

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MSK
TRUSTED INSPECTION

TEST REPORT

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

Report No. : BDS/610
Date : 01.08.2022
Sample No. : MSKGL/TD/2022-23/07/01432
Date of sampling : 15.07.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 70° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Reffm: 2017	7.38
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Reffm: 2014	74.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Reffm: 2014	13.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 37) 2004 RA 2014	BDL(DL:0.001)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 5) 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:0.07)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Reffm: 2014	BDL(DL:0.0007)
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 Reffm: 2014	BDL(DL:0.3)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Reffm: 2013	BDL(DL:0.2)
12.	Odour	Hazen	5	15	3025 (Part 4)-1983: Reffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Reffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Reffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Reffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Reffm: 2014	87.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984, Reffm:2017	398.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Reffm: 2009	162.0
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 Reffm: 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:0.05)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Reffm: 2014	BDL(DL:0.5)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992: Reffm: 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	46.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BBS/510

Date- 01.08.2022

33.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Reffm: 2014	DDL(DL:0.02)
34.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Reffm: 2014	KOH (DL:0.1)
35.	Chloramine	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Reffm: 2014	DDL(DL:0.1)
36.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2001 RA 2014	DDL(DL:0.01)
37.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Reffm: 2014	KOH (DL:0.01)
38.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	DDL(DL:0.01)
39.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (24th Edn) 6440C	DDL(DL:0.0001)
40.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	DDL(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. : RR3/11
Date : 01.08.2022
Sample No. : MSKGL/TD/2022-23/01/011339
Date of sampling : 15.07.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 Reffm: 2012	7.66
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Reffm: 2014	58.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Reffm: 2014	51.0
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:0.07)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Reffm: 2014	BDL(DL:0.0000X)
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 Reffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Reffm: 2014	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Reffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Reffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Reffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Reffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32) 1988 Reffm: 2014	92.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Reffm:2017	385.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Reffm: 2014	187.0
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 Reffm: 2014	22.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	167.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.2)
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 Reffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Reffm: 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	19.0

MSK TESTING & INSPECTION

Ref. No. BDS/511 **Date: 01.08.2023**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rflm: 2014	BDL(DL:0.05)
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 54) 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 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

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TEST REPORT

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

Report No. : BBS/512
Date : 01.08.2022
Sample No. : MSKOL/EM/2022/23/0/01454
Date of sampling : 15.07.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 25° C)	—	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rflm: 2017	7.87
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24) 1986 Rflm: 2014	87.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40) 1991 Rflm: 2014	19.0
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:0.07)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48) 1994 Rflm: 2014	BDL (DL:0.00007)
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 Rflm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rflm: 2014	BDL(DL:0.2)
12.	Colour	Hazen	5	15	IS 3025 (Part 4)-1983, Rflm:2012	BDL(DL:1.0)
13.	Odour	—	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rflm:2012	Agreeable
14.	Turbidity	NTU	1	5	IS 3025 (Part 10)-1984 Rflm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rflm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rflm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rflm: 2014	98.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16) 1984; Rflm:2017	607.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rflm: 2009	100.0
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 Rflm: 2014	22.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21) 2015	127.0
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 Rflm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C6H5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rflm: 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)- 2014	52.0

Continuation Sheet

MSK TESTING • INSPECTION

Ref. No. R88/812

Date- 01.08.2022

32.	Sulphide (as H2S)	mg/l	0.04	No Relaxation	IS 3025 (Part 29)- 1991; Reflm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Reflm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Reflm: 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 Reflm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.3	1.0	IS 13428(Annex K) 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (22nd 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

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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/501
Date : 01.08.2022
Sample No. : MSKGL/ED/2022 23/07/01247
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 02.07.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120D 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.87	7.21
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	277.0	12.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	178.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	460.0	8.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	22.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	28.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	30.0	2.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	900.0	79.0

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
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/503
Date : 01.08.2022
Sample No. : MSKGL/ID/2022-23/07/01444
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 16.07.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	–	APHA (23rd Edition) 2120B 2017	Bluish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.60	7.10
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	75.0	8.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	80.0	7.8
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	188.0	20.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	5.2	<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); Reffm:2014	31.0	2.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1400.0	90.0

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/513
Date : 01.08.2022
Sample No. : MSKGL/ED/2022-23/07/01244
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 02.07.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.93	7.38
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	231.0	7.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	116.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	388.0	<4.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	18.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	15.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	25.0	1.4
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1200.0	110.0

Report Prepared by:

BBSR

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited
N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U51909WB1930PTC008097]

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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/514
Date : 01.08.2022
Sample No. : MSKGL/BD/2022-23/07/01446
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 16.07.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 9.0	APHA (23rd Edition) 4500 H B	6.90	7.10
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	94.0	6.8
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	102.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	232.0	<4.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	6.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	79.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999), Rflm:2014	40.0	1.5
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1900.0	78.0

Report Prepared by:

BRSR

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/302
Date : 01.08.2022
Sample No. : MSKCL/ID/2022-23/07/01246
Sample Description : EFFLUENT WATER
Sampling Location : STP (40KLD)
Date of sampling : 02.07.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.84	7.24
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	246.0	10.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	146.0	<2.0
7.	COD	mg/l	<30.0	APHA (23rd Edition) 5220B 2017	412.0	8.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	20.0	<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); Rflm:2014	37.0	2.7
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1700.0	70.0

Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

Mitra S. K. Private Limited

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MSK TESTING + INNOVATION

TEST REPORT

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

Report No. : BBS/501
Date : 01.08.2022
Sample No. : MSKGL/ED/2022-23/07/01448
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 16.07.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	–	APHA (23rd Edition) 2120B 2017	Bluish	Colourless
2.	Odour	—	–	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	—	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.68	7.44
4.	Appearance	—	–	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	158.0	6.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	42.0	3.8
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	110.0	11.3
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	20.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reffm:2014	32.0	2.1
11.	Fecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1400.0	58.0

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 : DOSINGIA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/507
Date : 01.08.2022
Sample No. : MSK/GL/ED/2022 23/07/01248
Sample Description : EFFLUENT WATER
Sampling Location : ETP 150KLD
Date of sampling : 02.07.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	–	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2	Odour	----	–	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.88	7.52
4.	Appearance	----	–	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	166.0	8.0
6	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	103.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	306.0	4.0
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	38.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reaff.2014	49.0	1.8
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2100.0	130.0

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/508
Date : 01.08.2022
Sample No. : MSKGL/ED/2022-23/07/01450
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 16.07.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.60	7.50
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	219.0	12.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	136.0	4.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	370.0	11.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	14.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	38.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reffm:2014	16.0	2.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1700.0	75.0

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
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/517
Date : 01.08.2022
Sample No. : MSKGL/ED/2022-23/07/00600
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 04.07.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987,Reflm:2011	7.93
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Reflm:2006	4221.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Reflm:2013	0.80
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	278.0
5.	Moisture content	%	Lab Method	16.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/T&E/1/10	2157.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	525.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<25.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	18.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	301.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/T&E/1/13	398.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1874.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	598.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	21.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	10.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	15.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	305.0

MSK TESTING ■ INSPECTION

Ref. No. EBS/517

Date- 01.08.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	6.7
19.	Boron (as B)	mg/kg	IS 13428: 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1789.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	27.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	438.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	390.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B , Dec, 1996, 8270 D - Feb.2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.3
26.	Sand	%	TPM/MSK/P&E/1/36A	37.0
27.	Silt	%	TPM/MSK/P&E/1/36A	29.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	34.0

Biological Result

Sl No.	Parameters	Unit	Result
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1297
2.	Total count (Phytobenthos)	50 mg wet sediment	254
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity Index (Phytobenthos)	----	1.75
5.	Major Species (phytobenthos)	----	*Bacillaria mobilensis, Navicula clementum*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Ptychaeta-40,Bivalvia-16
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m^2	166

Report Prepared by:

For Mitra S.K. Private Limited

Authorised 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/518
Date : 01.08.2022
Sample No. : MSKGL/ELI/2022-23/07/00601
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 04.07.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Reflm:2011	7.52
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14) 1984;Reflm:2006	5112.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972, Reflm:2015	0.91
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	266.0
5.	Moisture content	%	Lab Method	30.0
6.	Chloride (as Cl⁻)	mg/kg	TPM/MSK/P&E/1/10	2991.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	578.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/13	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	174.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	77.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	3788.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	489.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	12.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	16.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	26.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	421.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. RRS/918

Date- 01.09.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	6.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	4478.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	25.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reflm:2014	460.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	480.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	44.0
27.	Silt	%	TPM/MSK/P&E/1/36A	36.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	20.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1222
2.	Total count (Phytobenthos)	50 mg wet sediment	247
3.	No of species (Phytobenthos)	Nos.	2
4.	Diversity index (Phytobenthos)	----	1.52
5.	Major Species (phytobenthos)	----	*Biddulphia mobiliensis, Navicula clementium*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Phyllosera-30,Bivalvia-08
8.	Total no. of species encountered (Fauna)	Nos.	10
9.	Total fauna (Fauna)	per m²	170

Report Prepared by:

For Mitra S.K. Private Limited

Authorised 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. : BHS/519
Date : 01.08.2022
Sample No. : MSKOL/HD/2022-23/07/00700
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 18.07.2022

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	µs/cm	IS 3025 (Part 14) 1984;Rffm:2006	3339.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.81
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	280.0
5.	Moisture content	%	Lab Method	34.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	3984.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	660.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/47	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	8.7
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	117.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	44.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	3015.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	563.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	14.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	18.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	22.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	377.0

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MSK TESTING & INSPECTION

Date: 01.08.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	12.0
	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	4887.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	30.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	439.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	500.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb 2007	<1.0
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/T&E/1/76A	48.0
27.	Silt	%	TPM/MSK/P&E/1/36A	32.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	20.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt	1550
2.	Total count (Phytobenthos)	50 mg wet sediment	270
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity Index (Phytobenthos)	----	1.99
5.	Major Species (phytobenthos)	----	*Bidulphia mobilensis, Spirulina curvigrana*
6.	Name of Phylum (Fauna)	----	Annelida, Molluscs
7.	Class & Number of individuals encountered (Fauna)	----	Phyllocta-72,Bivalvia-38
8.	Total no. of species encountered (Fauna)	Nos.	34
9.	Total fauna (Fauna)	per m^2	288

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/520
Date : 01.08.2022
Sample No. : MSKGL/ED/2022-23/03/00701
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 18.07.2022

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	2295.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.6
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	260.0
5.	Moisture content	%	Lab Method	31.0
6.	Chloride (as Cl-)	mg/kg	TPM/MSK/P&E/1/10	2744.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	470.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	174.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	328.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1571.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	214.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	22.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	13.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	26.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	184.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. 8108/570

Date- 01.08.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	12.7
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1997.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	14.6
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	231.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	197.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B , Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	39.0
27.	Silt	%	TPM/MSK/P&E/1/36A	41.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	20.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1422
2.	Total count (Phytobenthos)	50 mg wet sediment	280
3.	No of species (Phytobenthos)	Nos.	7
4.	Diversity index (Phytobenthos)	----	1.80
5.	Major Species (phytobenthos)	----	*Gymnigma sp., Nasehia distans*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-74,Bivalvia-29
8.	Total no. of species encountered (Fauna)	Nos.	17
9.	Total fauna (Fauna)	per m^2	180

Report Prepared by:

For Mitra S.K. Private Limited

Authorised Signatory

MSK TESTING & INSPECTION

Ref: MSKCCL/ED/RHU-2022/02700 Date: 01.08.2022

Site Specific Monitored Meteorological Data

For : The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha

Sr. No.	Parameters		July.22
1.	Temperature (°C)	Minimum	25.6
		Maximum	38.2
		Average	30.3
2.	Relative Humidity (%)	Minimum	43.4
		Maximum	93.9
		Average	70.9
3.	Wind Speed (m/s)	Minimum	0.27
		Maximum	14.1
		Average	3.66
4.	Wind Direction (%)	N	8.7
		NNE	19.5
		NE	6.2
		ENE	1.9
		E	2.55
		ESE	7.64
		SE	20.1
		SSE	1.78
		S	6.32
		SSW	2.87
		SW	3.31
		WSW	7.22
		W	4.89
		WNW	6.53
		CALM	0.84
5.	Rainfall (mm)	Total	86.2
		Minimum Day Wise	0.0
		Maximum Day Wise	10.2
		Average	0.11
6.	Ambient Pressure (mm Hg)	Minimum	747.8
		Maximum	758.7
		Average	752.0

(Source – Site Specific Data)

Prepared By

Verified By

MONTHLY ENVIRONMENT MONITORING REPORT
JUNE- 2022

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: RBS/240A

Date: 04.07.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Bhoinga, Bhadrak, Odisha
Work Order No.	4507006186
Reference No.	MSKGOI/EID/2022-23/000000
Type of Sample	Ambient Air Sample
Sampling Location	Colony Area
Sampling Done by	Mr. Soumya Ranjan Chadal
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lulu Envirotech, CO Analyzer & VOC Sampler

Date	PM10 (µg/m³)	PM2.5 (µg/m³)	SO2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH3 (µg/m³)	Ozone (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C6H6 (µg/m³)	Benzo (a) Pyrene (ng/m³)
	PARAMETERS											
01.06.2022	52.50	23.60	7.50	21.40	0.39	22.50	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
05.06.2022	61.80	29.40	8.60	23.30	0.63	19.20	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
08.06.2022	58.30	27.00	7.60	21.70	0.47	17.40	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
12.06.2022	54.20	32.60	7.70	20.60	0.62	18.30	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
15.06.2022	56.40	20.70	6.80	17.50	0.70	15.60	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
22.06.2022	46.60	24.80	7.80	20.80	0.73	24.30	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
27.06.2022	50.70	26.40	8.40	22.40	0.63	18.50	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
29.06.2022	50.10	25.60	7.80	18.60	0.49	12.40	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
29.06.2022	52.30	27.00	6.60	18.20	0.71	15.20	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
Monthly Average	55.37	26.64	7.51	20.74	0.62	17.42	<20.0	<0.01	<5.0	<1.0	<1.2	<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. 2017)	IS 5182: Part 10:1999 (Reaff. 2014)	IS 5182: Part 25:2003	IS 5182: Part 05:1974	EPA IO3.1 08.19 99	EPA IO3.1 08.1999	EPA IO3.1 08.1999	IS 5182: Part 11:2006 Reaff. 2017	IS 5182: Part-22:2004 Reaff. 2011

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

Prepared By

Checked By

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MSK TESTING ■ INSPECTION

Report No: RBS/300R

Date: 04.07.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4301000186
Reference No.	MSKGL/ED/2022-23/003000
Type of Sample	Ambient Air Sample
Sampling Location	Kanak Prasad Village
Sampling Done by	Mr. Soumya Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 184) Lab Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM10 (µg/m³)	PM2.5 (µg/m³)	SO2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH3 (µg/m³)	O3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C6H6 (µg/m³)	B(a)P (ng/m³)
01.06.2022	38.30	28.30	6.10	26.70	0.77	22.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
02.06.2022	41.70	31.50	7.40	24.50	0.49	20.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
03.06.2022	38.50	30.40	8.60	28.30	0.64	21.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.06.2022	30.50	23.70	8.10	23.40	0.43	17.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.06.2022	33.60	27.10	7.90	20.70	0.74	15.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
19.06.2022	41.10	26.80	8.60	25.20	0.54	21.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.06.2022	42.40	24.20	8.40	22.40	0.62	19.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
21.06.2022	36.10	27.60	7.20	21.70	0.77	17.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.06.2022	32.30	25.70	6.80	27.10	0.45	24.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	38.12	27.03	7.48	24.10	0.61	20.59	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB New (NAAQ 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 38:2018	IS 5182: Part 09:1974	EPA-IO3.4 IO3.5 99	EPA-R44.Lin no.1999	EPA-R33.Lin no.1999	IS 5182(Part 11):2006 Reaff 2012	IS 5182(Part 12):2001 Reaff: 2014

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

Prepared By – S. Kumar

Checked By- M. K. Rath

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MSK TESTING • INSPECTION

Report No: BBS/300C **Date: 04.07.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4507006186
Reference No.	MSKGL/ED/2022-23/003000
Type of Sample	Ambient Air Sample
Sampling Location	Near BMH
Sampling Done by	Mr. Sanjaya Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 850), 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_2 (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O₃ (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
01.06.2022	66.60	34.70	9.70	28.40	0.79	26.10	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
03.06.2022	57.40	32.70	7.10	30.30	0.81	26.20	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
08.06.2022	29.30	30.30	6.60	24.40	0.80	19.80	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
12.06.2022	38.30	30.20	8.30	26.30	0.83	28.10	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
15.06.2022	64.30	33.60	7.30	29.80	0.61	24.60	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
19.06.2022	56.60	27.20	7.70	27.60	0.55	17.10	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
22.06.2022	48.40	21.60	8.10	21.30	0.40	15.50	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
26.06.2022	52.40	26.80	9.30	24.70	0.47	16.10	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
29.06.2022	38.70	28.40	7.60	28.70	0.81	27.40	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
Monthly Average	57.81	29.77	7.99	26.22	0.63	21.50	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
CPCB, New Delhi NAAQ 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 23:2018 (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 28:2018	IS 5182: Part 09:1974	EPA - IO3.4 June, 1999	EPA - IO3.4Jun ne,1999	EPA - IO3.4Jun ne,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 Gazette Notification

Prepared By – S. Kanungo

Checked By- A. K. Dash

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MSK TESTING & INSPECTION

Report No: BRS/0801

Date: 04.07.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dangingia, Bhadrak, Odisha**
Work Order No.	**4802006186**
Reference No.	**MSKCL/EH/2022-23/003000**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near Jetty**
Sampling done by	**Mr. Somaya Ranjan Ghadai**
Sampling Duration	**24hrs**
Monitoring Instrument	**RDS (APM 460), FPS (APM 430) Lata Envirotech, CO Analyzer & VOC Sampler**

Date	PARAMETERS											
	PM10 (µg/m³)	PM2.5 (µg/m³)	SO2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH3 (µg/m³)	O3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C6H6 (µg/m³)	BaP (ng/m³)
01.06.2022	68.10	33.60	8.90	28.30	0.67	26.40	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
05.06.2022	61.40	27.70	6.60	22.20	0.18	24.60	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
08.06.2022	57.20	29.10	7.80	26.60	0.44	21.30	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
12.06.2022	54.30	22.50	9.10	21.20	0.63	17.20	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
15.06.2022	58.60	27.60	8.30	30.60	0.80	26.60	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
19.06.2022	48.30	24.30	7.60	22.30	0.70	19.30	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
22.06.2022	59.60	26.60	6.40	26.40	0.74	22.60	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
26.06.2022	50.30	24.70	7.50	20.60	0.66	18.10	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
29.06.2022	54.30	28.50	6.90	26.10	0.54	22.70	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
Monthly Average	56.18	27.40	7.73	26.01	0.69	22.61	<20.0	<0.01	<5.0	<1.0	<0.2	<0.5
CPCB, New Delhi NAAQ Standard	100	60	80	80	4	400	100	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 2017)	IS 5182 : Part 6 :2006 (Reaff :2012)	IS 5182 : Part 10 :1999 (Reaff:2014)	IS 5182: Part 26:2019	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 Gov. Notification

Prepared By

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MSK
TESTING & INSPECTION

Report No: BBS/300K

Date: 04.07.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4500206156
Reference No.	MSKGL/RD/2022/24/003000
Type of Sample	Ambient Air Sample
Sampling Location	Dosinga Village
Sampling Done by	Mr. Soumya Ranjan Chorbal
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 850), FPS (APM 234) Lata Environtech, 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)	Ni (µg/m³)	Zn (µg/m³)	Pb (µg/m³)	Hg (µg/m³)	As (µg/m³)	Cd (µg/m³)	Ber (µg/m³)
01.06.2022	34.40	27.40	7.40	28.60	0.72	20.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
05.06.2022	30.70	24.10	8.10	21.40	0.68	18.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.06.2022	38.60	27.60	6.40	18.10	0.59	14.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.06.2022	31.30	24.10	7.10	21.60	0.61	20.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.06.2022	34.60	27.10	7.60	22.30	0.71	20.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
19.06.2022	44.50	22.60	7.80	18.10	0.61	14.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.06.2022	40.30	20.10	6.60	16.30	0.65	13.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
26.06.2022	48.70	23.30	5.40	18.70	0.49	15.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.06.2022	42.40	19.80	6.10	15.20	0.40	12.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	39.43	24.23	7.11	19.53	0.60	16.58	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi NAAQ Standard	100	60	80	80	4	100	150	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 28:2018	IS 5182: Part 09:1974	EPA - 103.4 June, 1999	EPA - 103.4Jun ne,1999	EPA - 104.4Jun ne,1999	IS:5182 (Part-11):2006 (Reaff.2012)	IS:5182 (Part-17):2014 (Reaff.: 2014)

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

Prepared By –

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MSK TESTING & INSPECTION

Report No: RRS/390P

Date: 04.07.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Jovinpur, Bhadrak, Odisha
Work Order No.	1807006186
Reference No.	MSKCH/ED/2022 24/003000
Type of Sample	Ambient Air Sample
Sampling Location	Near Bhaderkunika
Sampling Done by	Mr. Soumya Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 430) 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)	Ozone (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
01.06.2022	48.40	21.40	6.40	22.40	0.53	21.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
03.06.2022	53.20	26.10	7.60	21.40	0.61	17.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.06.2022	55.60	28.70	9.80	19.10	0.49	14.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.06.2022	46.20	23.30	7.10	20.60	0.37	17.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.06.2022	48.60	23.80	7.60	17.30	0.66	20.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
19.06.2022	47.30	21.60	6.90	19.10	0.77	13.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.06.2022	42.40	24.10	6.60	18.40	0.40	15.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
26.06.2022	44.70	22.30	7.00	20.70	0.47	20.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.06.2022	40.20	20.70	7.10	21.40	0.45	22.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	47.41	24.08	7.33	20.05	0.52	18.14	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi NAAQ 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. 2017	IS 5182 : Part 6:2006 (Reaff. 2012)	IS 5182 : Part 10 :1999 (Reaff.2014)	IS 5182: Part 26:2018	IS 5182: Part 05:1974	EPA - 103,4 June, 1999	EPA - 103,4Ju ne,1999	EPA - 103,4Ju ne,1999	IS:5182 (Part-11):2006 Reaff.2017	IS-5182 (Part. 17):2004 Reaff.: 2014

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

Prepared By – S. Kanungo

Checked By- A. K. Dash

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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/309
Date : 04.07.2022
Sample No. : MSKGL/HO/2022-23/06/00700
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day Leq. Time dB(A)		Night Time Leq. dB(A)	
			Results	LIMIT	Results	LIMIT
1.	04.06.2022	Colony Area (R)	42.7	55	39.1	45
2.	06.06.2022	Kunuk Proud Village (R)	46.3	55	40.6	45
3.	11.06.2022	Near BMH (I)	60.4	75	47.2	70
4.	13.06.2022	Near Jetty (I)	70.8	75	65.9	70
5.	18.06.2022	Dosinga Village (R)	49.2	55	41.6	45
6.	20.06.2022	Near Bhitarkanika (Eco Sensitive Zone)	42.3	50	37.5	40

Noise Limit as per CPCB

Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

NOTE :
Day Time : 06.00 Hr. 22.00 Hr.
Night Time 22.00 Hr. 06.00 Hr.

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. : HBS/310
Date : 04.07.2022
Sample No. : MSKAJL/ID/2022-23/06/00910
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg. dB(A)
1.	01.06.2022	Stock Yard	80.8	41.3	64.3
2.	02.06.2022	Wagon Tippler	87.6	54.1	79.3
3.	05.06.2022	Near Silo	81.3	61.9	82.4
4.	07.06.2022	Near Stacker & Reclaimer	85.2	70.1	86.2
5.	08.06.2022	Project Area	79.1	43.4	70.6
6.	09.06.2022	Transfer Point	89.3	59.2	77.5
7.	12.06.2022	Workshop	94.2	76.1	89.1
8.	14.06.2022	Steel Yard	70.8	45.3	64.7
9.	15.06.2022	PCC Shed	68.5	49.8	62.1
10.	16.06.2022	Near Port Canteen	64.8	44.2	60.6

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

TEST REPORT

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

Report No. : RBS/367
Date : 04.07.2023
Sample No. : MSKGL/HO/2022-23/06/00510
Sample Description : Flue Gas Monitoring
Date of Sampling : 25.06.2023
Time of Sampling : 10:55 AM

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		
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	: 0.0933 m^2		
C.	**Analysis/Characteristic of stacks**			
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)	176		IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	752		USEPA Part 2
3.	Velocity of gas (m/sec.)	14.60		IS 11255 (Part III)
4.	Quantity of gas flow (Nm^3/hr.)	713		IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	0.129	≤ 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm^3)	<5.0	----	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	0.170	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	0.030	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	0.029	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	0.199	≤ 4.0 (g/Kw/hr)	USEPA Part 18

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/766
Date : 04.07.2022
Sample No. : MSKGL/ED/2022-23/06/00508
Sample Description : Flue Gas Monitoring
Date of Sampling : 23.06.2022
Time of Sampling : 10.20 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		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 2.01 m		
2.	Diameter of the stack at sampling point	: 0.07 m		
3.	Height of the sampling point from GL	: 2.01 m		
4.	Area of Stack	: 0.00385 m²		
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)	109	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	752	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	21.44	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm³/hr.)	227	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	0.316	≤3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm³)	<5.0	----	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	0.490	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	0.97	≤0.3 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	0.060	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	0.550	≤4.7 (g/Kw/hr)	USEPA Part 18

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/364
Date : 01.07.2022
Sample No. : MSKGL/ED/2022-22/06/00507
Sample Description : Flue Gas Monitoring
Date of Sampling : 23.06.2022
Time of Sampling : 09:10 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	: 180 KvA		
B.	**Physical characteristics of stack :**			
1.	Height of the stack from ground level	: 3.5 m		
2.	Diameter of the stack at sampling point	: 0.09 m		
3.	Height of the sampling point from GL	: 3.5 m		
4.	Area of Stack	: 0.00636 m²		
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 Mucl & CC**	**METHOD**
1.	Temperature of emission (°C)	135	----	IS 11255 (Part III)
2.	Barometric pressure (mm of H_g)	752	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	30.0	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm³/hr.)	325	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	0.096	≤ 7.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm³)	<5.0	----	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw-hr)	0.179	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	0.077	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	0.016	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	0.155	<4.0 (g/Kw/hr)	USEPA Part 18

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. : BDS/363
Date : 04.07.2022
Sample No. : MSKGL/FTV/2022-23/06/00508
Sample Description : Flue Gas Monitoring
Date of Sampling : 18.06.2022
Time of Sampling : 11:00 AM

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		
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 m²		
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)	128	---	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	751	--	USEPA Part 2
3.	Velocity of gas (m/sec.)	17.41	---	IS 11255 (Part III)
4.	Quantity of gas flow (Nm³/hr.)	225	---	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	0.488	< 3.5 (g/Kw/hr)	IS 5182 (Part X)
6.	Concentration of Sulphur Dioxide (mg/Nm³)	<5.0	--	IS 11255 (Part II)
7.	Concentration of Nitrogen Dioxide (g/kw hr)	0.341	-	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	0.086	< 0.3 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw hr)	0.077	---	USEPA Part 18
10.	NOx + HC (g/kw-hr)	0.618	< 4.7 (g/Kw/hr)	USEPA Part 18

Report Prepared by:

For Mitra S.K. Private Limited

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MSK
TEST | 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/301
Date : 04.07.2022
Sample No. : MSKGL/ED/2022-23/06/00810
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 04.06.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23rd Edition) 4500 H-B	6.72	7.13
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	314.0	12.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	101.0	6.8
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	310.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	8.7	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	32.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reflm:2014	39.0	3.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1800.0	71.0

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
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/303
Date : 04.07.2022
Sample No. : MSKGL/ED/2022/22/06/01711
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 18.06.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.72	7.08
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	87.0	4.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	96.0	6.8
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	298.0	20.0
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	21.0	1.2
10	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reffm.2014	29.0	2.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1520.0	89.0

Report Prepared by:

BBSR

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/307
Date : 04.07.2022
Sample No. : MSKGL/ED/2022-23/06/00842
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 04.06.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120D 2017	Blackish	Colourless
2.	Odour	----		APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C		6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.89	7.28
4.	Appearance		--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	152.0	14.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	82.0	6.8
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220D 2017	240.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	6.5	<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); Rflm:2014	36.0	1.6
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1700.0	92.0

Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

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MSK
LABTICO 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/308
Date : 04.07.2022
Sample No. : MSKGL/ETP/2022-23/06/01713
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 18.06.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	--	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.71	7.15
4.	Appearance	--	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	115.0	<2.5
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	130.0	5.6
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	308.0	16.0
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	20.0	0.71
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999), Reffm:2014	32.0	1.6
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1800.0	66.0

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 : DHAMKA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BR3/302
Date : 04.07.2022
Sample No. : MSKGI /ED/2022-23/06/00844
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 04.06.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.61	7.09
4.	Appearance	----	--	Lab Method	Turbid	Clear
5	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	256.0	10.3
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	93.0	6.0
7	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	272.0	12.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	12.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	38	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	47.0	2.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2100.0	87.0

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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. : BHS/304
Date : 04.07.2022
Sample No. : MSKGL/ED/2022-23/06/01715
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 18.06.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	--	6.5 - 9.0	APHA (23rd Edition) 4500 H-B	6.82	7.41
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	197.0	<2.5
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	102.0	5.4
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	270.0	19.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	8.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	24.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reflm:2014	76.0	3.5
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1500.0	77.0

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 : DOSINGIA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/105
Date : 04.07.2022
Sample No. : MSKGL/BB/2022-23/06/00846
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 04.06.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.93	7.48
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	205.0	7.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	32.0	4.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	95.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220D 2017	2.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3 F 2017	28	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reflm:2014	36.0	2.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2600.0	110.0

Report prepared by:

For Mitra S. K. Private Limited

Authorized Signatory

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MSK
CREATING INSPIRATION

TEST REPORT

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

Report No. : BRS/306
Date : 04.07.2022
Sample No. : MSKGI /ED/2022-23/06/01717
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 18.06.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H B	6.97	7.36
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	198.0	6.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	82.0	8.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	202.0	20.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	9.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	33.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reffm.2014	41.0	1.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	3300.0	139.0

Report Prepared by:

BRSR

For Mitra S. K. Private Limited

Authorized Signatory

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MSK TESTING & INSPECTION

Ref : MSKGL/FD/2022-23/00568

Date : 01.07.2022

Client Name & Address	M/s The Dhamra Port Company Limited, Bayinga, Bhadrak, Odisha
Work Order No.	4802006186
Reference No.	MSKGL/FD/2022-23/00568
Type of Sample	Piezometric Well
Sampling Done by	Mr. Saumya Ranjan Ghadai

GROUND WATER LEVEL MONITORING REPORT

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	15.06.2022	16.30
2	Near WTP	15.06.2022	14.00

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 : DORINGA, PO : DHAMRA
DIST : BHADRAK, 756171 ODISHA

Report No : 888/512
Date : 04.07.2022
Sample No. : MSKGL/FD/2022-23/06/01720
Date of sampling : 15.06.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 20° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Reffm: 2012	7.20
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Reffm: 2014	48.0
3.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)- 1988 Reffm: 2014	41.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 37) 2005 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 4905 (Part 12) 1994 Reffm: 2014	BDL(DL:0.0005)
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 Reffm: 2014	BDL(DL:0.5)
11.	Phenols (as Fe)	mg/l	1.0	1.5	IS 3025 (Part 43) 2008 Reffm: 2014	BDL(DL:0.5)
12.	Colour	Hazen	5	15	3025 (Part 4)-1984; Reffm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Reffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Reffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Reffm: 2014	BDL(DL:0.03)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Reffm: 2014	9.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Reffm:2012	212.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Reffm: 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 Reffm: 2014	23.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	182.0
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 Reffm: 2014	BDL(DL:0.1)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Reffm: 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_6)	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) 2014	59.0

Mitra S. K. Private Limited

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Ref. No. 1135/312

Date- 04.07.2022

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rflm: 2014	RDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rflm: 2014	RDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rflm: 2014	RDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 7) 2004 RA 2014	RDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Rflm: 2014	RDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	RDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edn.) 6440C	RDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	RDL(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. : DDS/313
Date : 04.07.2022
Sample No. : MSKGL/FD/2022/23/06/01721
Date of sampling : 15.06.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 R(Re: 2012	7.04
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 R(Re: 2014	58.0
3.	Cyanide (as Cn)	mg/l	75	200	IS 3025 (Part 40)- 1991 R(Re: 2014	52.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 37) 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:0.05)
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 R(Re: 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 R(Re: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 R(Re: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	IS 3025 (Part 4) 1983; R(Re:2012	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5) 1983 R(Re:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10) 1984 R(Re: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 R(Re:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 R(Re: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32) 1988 R(Re: 2014	64.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; R(Re:2012	204.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 R(Re: 2014	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 R(Re: 2014	37.0
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:0.1)
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 R(Re: 2014	1.2
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; R(Re: 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.	Sulfide	mg/l	—	—	IS 3025 (Part 29)- 2014	42.0

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MSK
TESTING • INSPECTION

Date:- 04.07.2022

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1986; Reffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34) 1988; Reffm: 2014	BDL(DL:0.1)
34.	Chromium	mg/l	0.05	No Relaxation	IS 3025 (Part 52)- 1986; Reffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27) 1986 Reffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.02)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edn.) 6408	BDL(DL:0.0001)
39.	Polychlorinated Diphenyls (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. : DDS/314
Date : 04.07.2022
Sample No. : MSKUL/FD/2022-23/06/01/21
Date of sampling : 15.06.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 25° C)	—	6.5 - 8.5	No Relaxation	IS 3025 (Part 11) 1983 Reffm: 2017	7.65
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Reffm: 2014	34.0
3.	Chloride (as Cl)	mg/l	75	600	IS 3025 (Part 40)- 1991 Reffm: 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 Reffm: 2014	BDL(DL:0.0007)
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 Reffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Reffm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983: Reffm:2012	BDL(DL:1.0)
13.	Odour	—	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Reffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10) 1984 Reffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)- 1988 Reffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Reffm: 2014	76.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16) 1984: Reffm:2012	248.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23) 1986 Reffm: 2009	172.0
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 Reffm: 2014	22.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2015	157.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.5)
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 Reffm: 2014	BDL(DL:0.5)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992, Reffm: 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

Mitra S. K. Private Limited

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MSK
TESTING & INSPECTION

Ref. No. BBS/314

Date- 04.07.2022

32.	Sulphide (as H2S)	mg/l	0.03	No Relaxation	IS 3025 (Part 29)- 1991; Affm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34) 1988; Affm: 2014	BDL(DL:0.1)
34.	Chloramine	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Affm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 7) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27) 1986 Affm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annx. K) 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (22nd 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

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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. : BDS/340
Date : 04.07.2022
Sample No. : MSKGL/HD/2022-23/06/00100
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 02.06.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26) 1987:RAffm:2011	7.22
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14) 1984:RAffm:2006	2268.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972: RAffm:2015	0.92
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	160.0
5.	Moisture content	%	Lab Method	30.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	5299.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	360.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	12.0
10.	Phosphate	mg/kg	TPM/MSK/P&E/1/12	197.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	285.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2213.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	190.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	14.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	42.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	29.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	780.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BBS/340 Date:- 04.07.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	9.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1978.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	14.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rltm:2014	470.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	575.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	32.0
27.	Silt	%	TPM/MSK/P&E/1/36A	28.0
28.	Clay	Nano	TPM/MSK/P&E/1/36A	40.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt	1750
2.	Total cover (Phytobenthos)	50 mg wet sediment	270
3.	No of species (Phytobenthos)	Nos.	2
4.	Diversity index (Phytobenthos)	—	1.45
5.	Major Species (phytobenthos)	—	*Coscinodiscus sp. Biddulphia mobiliensis*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Polychaeta-32,Bivalvia-13
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m^2	159

Report Prepared by:

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. : DDS/341
Date : 04.07.2022
Sample No. : MSK/GL/ED/2022-23/06/00101
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 02.06.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Reffm:2011	7.85
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Reffm:2006	5130.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Reffm:2015	0.72
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	62.0
5.	Moisture content	%	Lab Method	17.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	5265.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	1631.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/03	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	12.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	210.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	529.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	4315.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	170.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	12.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	41.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	11.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	279.0

Ref. No. BBS/341 Date: 01.07.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	17.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1684.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	10.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reffm:7014	455.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	417.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<30.00
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	46.0
27.	Silt	%	TPM/MSK/P&E/1/36A	30.0
28.	Clay	None	TPM/MSK/P&E/1/36A	24.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt	1492
2.	Total count (Phytobenthos)	50 mg wet sediment	721
3.	No of species (Phytobenthos)	Nos.	2
4.	Diversity Index (Phytobenthos)	----	1.54
5.	Major Species (phytobenthos)	----	*Cocconeis sp*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Phylum 31,Bivalvia 13
8.	Total no. of species encountered (Fauna)	Nos.	26
9.	Total fauna (Fauna)	per m²	150

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/3-12
Date : 04.07.2022
Sample No. : MSKOL/ELV/2022-22/06/00102
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 29.06.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26) 1987;Rffm:2011	7.85
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	4157.0
3.	Organic Matter	%	IS 2720 (Part 22) 1972; Rffm:2015	0.70
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	31.0
5.	Moisture content	%	Lab Method	28.0
6.	Chloride (as Cl⁻)	mg/kg	TPM/MSK/P&E/1/10	1387.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	147.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	7.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	12.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	18.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1368.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	147.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	23.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	16.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	90.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	151.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BDS/342

Date- 04.07.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	14.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	2650.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	11.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999), R/lm:2014	384.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/2/68	335.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	38.0
27.	Silt	%	TPM/MSK/P&E/1/36A	38.0
28.	Clay	None	TPM/MSK/P&E/1/36A	24.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1324
2.	Total count (Phytobenthos)	50 mg wet sediment	280
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)		1.84
5.	Major Species (phytobenthos)	---	*Biddulphia mobiliensis, Spirulina oceanica*
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Phychaeta-30,Bivalvia 31
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m³	217

Report Prepared by:

BDSR

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. : DPC/343
Date : 04.07.2022
Sample No. : MSKGL/ED/2022-23/06/00103
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 29.06.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;RAfm:2011	7.45
2.	Electrical Conductivity	µS/cm	IS 3025 (Part 14)-1984;RAfm:2006	4224.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; RAfm:2015	0.80
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	51.0
5.	Moisture content	%	Lab Method	31.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	4847.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	112.0
8	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/03	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	10.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	17.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1485.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	196.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	16.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	14.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	99.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	140.0

MSK
TESTING & INSPECTION

Ref. No. 005/343 Date- 04.07.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	14.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	2045.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	72.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reffm:2014	217.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	213.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	40.0
27.	Silt	%	TPM/MSK/P&E/1/36A	30.0
28.	Clay	None	TPM/MSK/P&E/1/36A	30.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1300
2.	Total count (Phytobenthos)	50 mg wet sediment	314
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	2.47
5.	Major Species (phytobenthos)	----	*Biddulphia mobilensis, Nitzschia distans*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered. (Fauna)	----	Plychaeta-80,Bivalvia-32
8.	Total no. of species encountered (Fauna)	Nos.	24
9.	Total fauna (Fauna)	per m²	190

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. : BES/344
Date : 04.07.2022
Sample No. : MSKOL/EI/2022-23/06/00104
Sample Description : Sea Sediment
Sampling Location : Dhamra River Mouth
Date of sampling : 29.06.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Reffm:2011	7.41
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Reffm:2006	7055.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Reffm:2015	1.2
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	32.0
5.	Moisture content	%	Lab Method	22.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1876.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	433.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Nitrophate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	2.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	5.6
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2005.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	421.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	4.3
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.4
16.	Zinc (as Zn)	mg/kg	EPA 6010D	8.1
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK TESTING&INSPECTION

Ref. No. 8888/344

Date- 05.07.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	6.9
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	7.1
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	3.2
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	11.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/T&E/3/68	13.6
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	54.0
27.	Silt	%	TPM/MSK/P&E/1/36A	16.0
28.	Clay	%	TPM/MSK/T&E/1/36A	30.0
29.	Texture	%	TPM/MSK/T&E/1/36A	Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1677
2.	Total count (Phytobenthos)	50 mg wet sediment	189
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	—	0.8054
5.	Major Species (phytobenthos)	—	*Cosciniodiscus, Pleurosigma*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Polychaeta-61,Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m²	167

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: LOSINGA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/345
Date : 04.07.2022
Sample No. : MSKGL/ID/2022-23/06/00105
Sample Description : Sea Sediment
Sampling Location : Dry Bulk Cargo Berth Face
Date of sampling : 29.06.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;RAfm:2011	7.55
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14) -1984;RAfm:2006	4860.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; RAfm:2015	1.9
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	19.0
5.	Moisture content	%	Lab Method	37.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2144.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	294.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/13	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	7.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	15.0
11.	Iron (as Fe)	mg/kg	TPM/MSK /P&E/1/13	6.6
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2018.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	321.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	2.4
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.6
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.2
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BBS/345

Date:- 04.07.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.8
19.	Boron (as B)	mg/kg	IS 12428- 2005,Annex H	8.5
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.5
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999), Reflm:2014	11.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	7.3
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.03
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	44.0
27.	Silt	%	TPM/MSK/P&E/1/36A	34.0
28.	Clay	None	TPM/MSK/P&E/1/36A	22.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1997
2.	Total count (Phytobenthos)	50 mg wet sediment	270
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	---	0.6555
5.	Major Species (phytobenthos)	---	*Navicula, Cocconeiscus.*
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)		Phylaeta-36,Bivalvia-17
8.	Total no. of species encountered (Fauna)	Nos.	30
9.	Total fauna (Fauna)	per m³	224

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/746
Date : 04.07.2022
Sample No. : MSKGL/ID/2022-23/06/00106
Sample Description : Sea Sediment
Sampling Location : Liquid/Gas/Cryogenic Berth Face
Date of sampling : 29.06.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26) 1987;RAffm:2011	7.74
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;RAffm:2006	3912.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; RAffm:2015	2.8
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	42.0
5.	Moisture content	%	Lab Method	20.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1389.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	770.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/11	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	3.1
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1708.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	344.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	3.7
15.	Nickel (as Ni)	mg/kg	EPA 6010D	3.1
16.	Zinc (as Zn)	mg/kg	EPA 6010D	9.8
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK
TESTING & INSPECTION

Ref. No. BR5/346

Date- 01.07.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	9.0
19.	Boron (as B)	mg/kg	IS 12428- 2005,Annex H	4.2
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.4
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	8.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.3
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	46.0
27.	Silt	%	TPM/MSK/P&E/1/36A	24.0
28.	Clay	None	TPM/MSK/P&E/1/36A	30.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobanthos)	CFU/g dry wt.	1889
2.	Total count (Phytobanthos)	50 mg wet sediment	257
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobanthos)	---	0.9350
5.	Major Species (phytobenthos)	---	*Biddulphia, Pleurosigma* ,
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-66,Bivalvia-20
8.	Total no. of species encountered (Fauna)	Nos.	11
9.	Total fauna (Fauna)	per m²	243

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/347
Date : 04.07.2022
Sample No. : MSKGL/ED/2022/23/06/00107
Sample Description : Sea Sediment
Sampling Location : Along Channel at 1 km
Date of sampling : 29.06.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Reffm:2011	8.40
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Reffm:2006	7501.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Reffm:2015	3.1
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	24.0
5.	Moisture content	%	Lab Method	37.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1588.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	607.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/11	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	13.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	6.9
11.	Iron (as Fe)	mg/kg	TPM/MSK/T&E/1/13	91.4
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2782.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	269.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	1.3
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.2
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.1
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BRS/A47

Date: 04.07.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	1.9
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	4.2
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	1.4
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reflm:2014	12.3
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	11.6
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec. 1996, 8270 D - Feb.2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	43.0
27.	Silt	%	TPM/MSK/P&E/1/36A	35.0
28.	Clay	Nous	TPM/MSK/P&E/1/36A	20.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1541
2.	Total count (Phytobenthos)	50 mg wet sediment	213
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity Index (Phytobenthos)	----	0.4781
5.	Major Species (phytobenthos)	----	*Bacillaria, Gyrosigma*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Ptychaeta 52,Bivalvia-24
8.	Total no. of species encountered (Fauna)	Nos.	18
9.	Total fauna (Fauna)	per m^3	330

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. : BRS/348
Date : 04.07.2022
Sample No. : MSKGI./ED/2022-23/04/0010R
Sample Description : Sea Sediment
Sampling Location : Along Channel at 5 km
Date of sampling : 29.06.2022

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	6645.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	2.3
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	57.0
5.	Moisture content	%	Lab Method	31.0
6.	Chloride (as Cl⁻)	mg/kg	TPM/MSK/P&E/1/10	737.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	487.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	3.9
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	15.1
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2274.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	278.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	1.9
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.8
16.	Zinc (as Zn)	mg/kg	EPA 6010D	14.2
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK
TEST INCORPORATION

Ref. no. RES/348

Date- 04.07.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.4
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	1.2
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	3.2
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); RCDu:2014	11.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/1/68	7.6
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec. 1996, 8270 D - Feb.2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	42.0
27.	Silt	%	TPM/MSK/P&E/1/36A	38.0
28.	Clay	None	TPM/MSK/P&E/1/36A	20.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay

Biological Results

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt	1877
2.	Total count (Phytobenthos)	50 mg wet sediment	261
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity Index (Phytobenthos)	----	1.5131
5.	Major Species (phytobenthos)	----	*Navicula,Gyrosigma*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Phychaeta-49,Bivalvia-14
8.	Total no. of species encountered (Fauna)	Nos.	52
9.	Total fauna (Fauna)	per m^3	197

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory

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TEST REPORT

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DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BHS/349
Date : 04.07.2022
Sample No. : MSKCL/ED/2022-23/06/00109
Sample Description : Sea Sediment
Sampling Location : Along Channel at 10 km
Date of sampling : 29.06.2022

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	5723.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	6.7
4.	Turbidity	N.T.U	APHA (21st Edition) 2130B	44.0
5.	Moisture content	%	Lab Method	36.0
6.	Chloride (as Cl-)	mg/kg	TPM/MSK/P&E/1/10	1915.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	466.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/14	17.1
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2245.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	1314.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	3.9
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.7
16.	Zinc (as Zn)	mg/kg	EPA 6010D	14.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

MSK TESTING & INSPECTION

Ref. No. BBS/349 Date- 04.07.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.4
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	3.9
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	3.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reffm:2014	13.6
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	6.7
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 D - Dec. 1996, 8270 D - Feb.2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	44.0
27.	Silt	%	TPM/MSK/P&E/1/36A	36.0
28.	Clay	None	TPM/MSK/P&E/1/36A	20.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1789
2.	Total count (Phytobenthos)	50 mg wet sediment	257
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity Index (Phytobenthos)	----	1.5229
5.	Major Species (phytobenthos)	----	*Synedra, Cocconeiformis sp.,*
6.	Name of Phylum (Fauna)	----	Anthropoda, Annelida
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-78,Bivalvia-44
8.	Total no. of species encountered (Fauna)	Nos.	44
9.	Total fauna (Fauna)	per m²	269

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/550
Date : 04.07.2022
Sample No. : MSKGL/ED/2022-23/06/00110
Sample Description : Sea Sediment
Sampling Location : Near Kunika Island
Date of sampling : 29.06.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH Value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.04
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14) 1984;Rffm:2006	4170.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	4.3
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	17.0
5.	Moisture content	%	Lab Method	25.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	509.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	2750.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	BDL
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	7.9
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2169.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	198.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	4.7
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.2
16.	Zinc (as Zn)	mg/kg	EPA 6010D	6.1
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. 8855/350

Date- 04.07.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.1
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	3.6
20.	Aluminium (as Al)	mg/kg	EPA 6010D	RDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	4.9
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reffm:2014	9.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	6.1
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/T&E/1/36A	46.0
27.	Silt	%	TPM/MSK/T&E/1/36A	24.0
28.	Clay	None	TPM/MSK/T&E/1/36A	30.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1679
2.	Total count (Phytobenthos)	50 mg wet sediment	270
3.	No of species (Phytobenthos)	Nos.	12
4.	Diversity Index (Phytobenthos)	----	1.6005
5.	Major Species (phytobenthos)		*Bidulphia, Navicula*
6.	Name of Phylum (Fauna)	----	Arthropoda, Annelida
7.	Class & Number of individuals encountered (Fauna)	----	Malacostraca-40,Polychaeta-09
8.	Total no. of species encountered (Fauna)	Nos.	32
9.	Total fauna (Fauna)	per m²	320

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. : 888/324
Date : 04.07.2022
Sample No. : MSKCL/TD/2022/24/06/00019
Date of sampling : 12.06.2022
Sampling Description : Ground Water
Sampling Location : Kanak Resort
Sampling Done By : Mr. Soumya Ranjan Chadal

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 22° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11) 1983 Rflm: 2017	7.88
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rflm: 2014	38.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rflm: 2014	28.0
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:0.07)
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 Rflm: 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 Rflm: 2012	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rflm: 2012	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983: Rflm:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5) 1983 Rflm:2017	Agreeable
14.	Turbidity	NTU	1	5	IS 3025 (Part 10) 1984 Rflm: 2017	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rflm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rflm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rflm: 2014	78.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16) 1984; Rflm:2017	787.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rflm: 2014	187.0
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 Rflm: 2014	26.0
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 Rflm: 2014	0.78
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rflm: 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	44.0

Mitra S. K. Private Limited

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Date- 04.07.2022

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1986; Reffm: 2014	BDL(DL:0.07)
33.	Ammonia (as total ammonia N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Reffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Reffm: 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 Reffm: 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 (22nd edn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	USEPA 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/525
Date : 04.07.2022
Sample No. : MSKGL/FD/2022-23/000[illegible]
Date of sampling : 12.06.2022
Sampling Description : Ground Water
Sampling Location : Rafkohi
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 25° C)	---	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rflm: 2017	7.82
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24) 1986 Rflm: 2014	48.0
3.	Chloride (as Cl)	mg/l	75	200	IS 3025 (Part 32)- 1988 Rflm: 2014	48.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 3) 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)-1991 Rflm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.0001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39) 1991 Rflm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60) 2008 Rflm: 2018	BDL(DL:0.5)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rflm:2012	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rflm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10) 1984 Rflm: 2017	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rflm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rflm: 2014	BDL(DL:0.05)
17.	Alkalinity (as CaCO)	mg/l	200	1000	IS 3025 (Part 32)-1988 Rflm: 2014	38.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rflm:2014	301.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rflm: 2009	174.0
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 Rflm: 2014	38.0
22.	Total Hardness (as CaCO3)	mg/l	200	600	IS 3025 (Part 21)-2014	170.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.5)
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 Rflm: 2014	0.60
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rflm: 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) 2012	42.0

Mitra S. K. Private Limited

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Ref. No: [illegible]

Date: 04.07.2022

32.	Sulphide (as H2S)	mg/l	0.10	No Relaxation	IS 3025 (Part 29)- 1991, Reffm 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988, Reffm 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986, Reffm 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 54) RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Reffm 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.) 6130C	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 : DHADRAK, PIN : 756171 ODISHA

Report No. : BMS/326
Date : 04.07.2022
Sample No. : MSKGL/FD/2022-23/06/00831
Date of sampling : 12.06.2022
Sampling Description : Ground Water
Sampling Location : Dosinga
Sampling Done By : Mr. Sourova Ranjan Ghadai

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 20° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11) 1983 Affm: 2012	7.93
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Affm: 2014	60.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Affm: 2014	33.0
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	15.0	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 Affm: 2014	BDL(DL:0.0001)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.0001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 Affm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Affm: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4) 1983, Affm 2012	BDL (DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5) 1983 Affm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Affm: 2014	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Affm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53) 1988 Affm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Affm: 2014	76.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984: Affm:2012	260.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Affm: 2014	166.0
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 Affm: 2014	27.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2013	175.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.2)
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 Affm: 2014	0.97
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43) 1992, Affm: 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	46.0

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Ref. No. B185/326 **Date- 04.07.2022**

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29) 1991, Rffm: 2014	BDL(DL:0.05)
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) 2009 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) : 2004	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.

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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/727
Date : 04.07.2022
Sample No. : MSKGL/ED/2022-23/03/00788
Sample Description : Surface Water
Sampling Location : Matai River Near DPCL Intake Point
Date of Sampling : 12.06.2022

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	7.07
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.05)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition)4500 – F C 2017	0.56
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition,3500 Fe B 2017	4.9
7.	Manganese as Mn	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL (DL:0.02)
8.	Phenolic Compound as C6H5OH	mg/l	1.0	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	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 4739(Part 48) 1994; Reaffirm 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 C 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 23rd 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	220.0
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edn,2550 B	35.0
22.	BOD (3days at 27°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	BDL(DL:2.0)
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220D 2017	3.0
24.	Oil & Grease	mg/l	10.0	APHA 24rd Edition, 5520B 2017	BDL(DL:0.1)
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:0.1)
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D 2017	BDL(DL:0.01)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Reaff:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition 4500P, B – D 2017	0.21
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	0.22
32.	Bioassay Test	—	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 7)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	TPS/MSK/P&P/033	Passthrough 850µm IS sieve
34.	Dissolved Oxygen	mg/l	———	APHA 23rd 2012 4500-O-C	4.7

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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/328
Date : 04.07.2022
Sample No. : MSKGI/ED/2022-23/06/00789
Sample Description : Surface Water
Sampling Location : Raw Water Reservoir
Date of Sampling : 12.06.2022

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	RDL(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	6.98
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition)3120B 2017 (ICP OES)	DDL(DL:0.02)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition)4500 – F-D 2017, 2017	RDL(DL:0.2)
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition,3500 Fe D 2017	0.49
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound as C_6H_5OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	DDL(DL:0.001)
9.	Selenium as Se	mg/l	2.0	APHA (23rd Edition) 3120B 2017	RDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	DDL(DL:0.0001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500-CN- F 2017	DDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	DDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1991, Rflm 2014	RDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	RDL(DL:0.07)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	RDL(DL:0.02)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 B 2017 (AAS Flame)	DDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	DDL(DL:0.02)
18.	Hexavalent Chromium as Cr^{+6}	mg/l	0.1	APHA 23rd Edition, 3500 Cr B	RDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	RDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	31.0
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edn,2550 B	25.0
22.	BOD (3days at 27°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	DDL(DL:2.0)
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	6.0
24.	Oil & Grease	mg/l	10.0	APHA 23rd Edition, 5520B 2017	RDL(DL:1.4)
25.	Ammonical Nitrogen as N	mg/l	50.0	APHA (23rd Edition) 4500-NH3-F 2017	RDL(DL:0.1)
26.	Total Kjeldal Nitrogen as N	mg/l	100.0	APHA (23rd Edition) 4500- Norg-D,2017	RDL(DL:0.4)
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D,2017	DDL(DL:0.01)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Rflm 2009	RDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition 4500P, B –D 2017	DDL(DL:0.05)
30.	Ammonia as NH_3	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	DDL(DL:0.1)
31.	Nitrate Nitrogen as NO_3	mg/l	10.0	APHA 23rd Edition) 4500 NO3 K 2017	0.80
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 850um IS sieve	IPM/MSK/P&E/5/55	Pass through 850um IS sieve
34.	Dissolved Oxygen	mg/l	------	APHA 23rd-2012,4500-O-C	6.3

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MSK
TESTING & INSPECTION

Date: 04.07.2022

SOIL ANALYSIS REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dodinga, Bhadrak, Odisha
Work Order No.	4800006186
Reference No.	MSKGL/EO/2022-23/002000
Type of Sample	Soil
Sampling Location	S1 : Dosinga
Date of Sampling	17.06.2022
Sampling Done by	Mr. Soumya Ranjan Ghadai

Sl. No.	Name of the Parameters		Unit	Test Method	Analysis Result
1.	pH Value		----	IS 2720 (Part-26)-1987	S1
2.	Colour		----	TPM/MSK/P&D/1/45	7.88
3.	Copper (as Cu)		mg/kg	EPA 610D	2 YR 5/4 Reddish Brown
4.	Iron (as Fe)		mg/kg	TPM/MSK/P&D/1/13	0.0
5.	Manganese (as Mn)		mg/kg	EPA 610D	7.1
6.	Bulk Density		g/cc	IS 2720 (Part-33)-1973	188.0
7.	Cadmium (as Cd)		mg/kg	EPA 610D	1.27
8.	Lead (as Pb)		mg/kg	EPA 610D	<2.0
9.	Nickel (as Ni)		mg/kg	EPA 610D	<2.0
10.	Total Chromium (as Cr)		mg/kg	EPA 610D	3.0
11.	Gravel		%	Lab Method	9.0
12.	Texture		----	TPM/MSK/P&D/1/16A	51.0
13.	Electrical Conductivity		µS/cm	IS 1476:2006, RA 2018	Sand
14.	Available Sodium (as Na)		mg/kg	TPM/MSK/P&D/1/4	1322.0
15.	Available Potassium (as K)		mg/kg	TPM/MSK/P&D/1/9	691.0
16.	Total Nitrogen (as N)		mg/kg	IS 14684:1999, RA 2014	90.0
19.	Total Organic Carbon		%	IS 2720 (Part-22) 1972	172.0
20.	Organic Matter		%	IS 2720 (Part-22) 1972	0.18
21.	Sodium Adsorption Ratio		----	TPM/MSK/P&D/1/31	0.24
22.	Available Phosphorus (as P)		mg/kg	TPM/MSK/P&D/1/12	3.1
23.	Zinc (as Zn)		mg/kg	EPA 6100	6.4
24.	Water Holding Capacity		%	TPM/MSK/P&D/1/17	5.0
25.	Cation Exchange Capacity		meq/100g	IS 2720 (Part-24)-1971	19.6
26.	Total Porosity		%	TPM/MSK/P&D/1/30	14.0
27.	Phosphorus		mg/kg	TPM/MSK/P&D/1/12	37.0
28.	Infiltration Rate		mm/hr	Method of Analysis of Soil by H.S. Tandon	149.0
29.	Particle Size Distribution	Sand	%	TPM/MSK/P&D/1/16A	77.0
		Silt			12.0
		Clay			10.0

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For Mitra S. K. Private Limited

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MSK TESTING & VALIDATION

Date: 04.07.2022

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802006138
Reference No.	MSK/CL/ED/2022/ 73/001000
Type of Sample	Marine Water
Sampling Location	Dhamra River Mouth
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 03.07.2022
Sampling Done by	Mr. Soumya Ranjan Choudhi

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	50.0	49.0
5	pH	---	APHA (23rd Edition) 4500-H-B	7.56	7.12
6	Electrical Conductivity	µS/cm	APHA (23rd Edition) 2510 B	31013.0	18468.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B 2017	18937.0	9399.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	118.0	107.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	11193.0	9887.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	1236.0	1180.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca D	960.0	798.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	1441.0	1312.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	6711.0	3980.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500 O-C/D	6.8	6.0
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) 5220D 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	1070.0	948.0
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-B	<0.1	<0.1
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	<0.4	<0.4
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 B	<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 4905(Part 48)-1994,Reflm 2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 2025(Part 39)-1994,Reflm 2014	<0.5	<0.5

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MSK TESTING & INSPECTION

Date: 04.07.2022

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4507006186
Reference No.	MSKGI/EIA/2022-23/001(00)
Type of Sample	Marine Water
Sampling Location	Dry Bulk Cargo Berth Face
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 03.07.2022
Sampling Done by	Mr. Somaya Ranjan Ghadai

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) 2150D	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	33.0	33.0
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	80.0	78.0
5	pH	—	APHA (23rd Edition) 4500-H-B	7.66	6.97
6	Electrical Conductivity	m/cm	APHA (23rd Edition) 2510 B	19007.0	18103.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B 2017	18170.0	16190.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540-D	150.0	100.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	11580.0	11100.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	1978.0	1618.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	368.0	302.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	1547.0	1106.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	6227.0	4380.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O C	6.6	5.9
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) 5520B 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	789.0	660.0
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	<0.5	<0.5
22	Ammonical Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition)4500-NH3-B	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500N C	<0.1	<0.1
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 B	<0.01	<0.01
25	Phenolic Compounds (as C6H5OH)	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	<0.05	<0.05
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48) 1994:Reffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39) 1991:Reffm:2014	<0.5	<0.5

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MSK TESTING & INSPECTION

Date: 04.07.2022

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Bosinga, Bhadrak, Odisha
Work Order No.	4500006188
Reference No.	MSKGL/ED/2022-23/001000
Type of Sample	Marine Water
Sampling Location	Liquid/Gas/Cyrogenic Berth Face
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 03.07.2022
Sampling Done by	Mr. Soumya Ranjan Ghadai

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	31.0	25.0
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	126.0	110.0
5	pH	---	APHA (23rd Edition) 4500-H+B	7.32	7.01
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	17956.0	12731.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B 2017	9057.0	7145.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	132.0	96.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	13133.0	10290.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	2433.0	2179.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	388.0	439.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	1729.0	1537.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	7622.0	6995.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition) 4500-O C	6.4	5.6
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23rd Edition) 5210B 2017	<2.0	<2.2
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	712.0	600.0
20	Nitrite (as NO_2)	mg/l	APHA (23rd Edition) 4500-NO2 B	<0.01	<0.01
21	Nitrate (as NO_3)	mg/l	APHA (23rd Edition) 4500-NO3 B	<0.5	<0.5
22	Ammoniacal Nitrogen (as NH_3-N)	mg/l	APHA (23rd Edition) 4500-NH3 F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23rd Edition) 4500-N C	0.4	0.97
24	Total Ammonia	mg/l	APHA (23rd Edition) 4111 D	<0.01	<0.01
25	Phenolic Compounds (as C_6H_5OH)	mg/l	APHA (23rd Edition) 5530 C	<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 5025(Part 48)-1994;Rflm.2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 5025(Part 39)-1994;Rflm.2014	<0.5	<0.5

Prepared By –

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MSK TESTING & INSPECTION

Date: 04.07.2022

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802006186
Reference No.	MSKGLED/2022-23/001000
Type of Sample	Marine Water
Sampling Location	Along Channel at 1Km
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 04.07.2022
Sampling Done by	Mr. Soumya Ranjan Ghadai

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23rd Edition) 2120D 2017	<1.0	<1.0
2	Odour	---	APHA (23rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23rd Edition) 2550 B	29.0	29.0
4	Turbidity	N.T.U	APHA (23rd Edition) 2130B	94.0	80.0
5	pH	-	APHA (23rd Edition) 4500-H B	8.08	7.94
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	40113.0	27707.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	17008.0	11612.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	158.0	131.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	22548.0	26757.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3500.0	3410.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	468.0	455.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	3067.0	2955.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	17510.0	10800.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition) 4500-O C,2009	6.4	5.8
15	Biochemical Oxygen Demand (3 days at 27±2)	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) 5520B,2017	<1.4	<1.4
18	Dissolved phosphate (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	1381.0	1292.0
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	<0.5	<0.5
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	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 B	<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 5073(Part 48),1994,Rflm 2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 5520B	<0.5	<0.5
31	Petroleum Hydrocarbon	mg/l	IS 5073(Part 39)-1994,Rflm 2014	<0.5	<0.5

Prepared By

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MSK TESTING & INSPECTION

Date: 04.07.2022

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosenga, Bhadrak, Odisha
Work Order No.	1800000188
Reference No.	MSKE/L/ED/2022-23/001000
Type of Sample	Marine Water
Sampling Location	Along Channel at 5Km
Date of Sampling	29.06.2022
Date of Analysis	29.06.2021 to 03.07.2022
Sampling Done by	Mr. Soumya Ranjan Chadal

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	72.0	81.0
5	pH	---	APHA (23rd Edition) 4500-H B	7.44	7.07
6	Electrical Conductivity	µS/cm	APHA (23rd Edition) 2510 B	35610.0	28330.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	35110.0	17910.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	137.0	110.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	23108.0	19242.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	1813.0	3920.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca D	890.0	710.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg D	3168.0	3019.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	12270.0	12157.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition) 4500-O C	6.6	5.3
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) 5520B,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	1814.0	1687.0
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-B	<0.5	<0.5
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	1.9	0.87
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	<0.07	<0.02
28	Cadmium	mg/l	APHA (23rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Reflm.2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2540B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Reflm.2014	<0.5	<0.5

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MSK TESTING • INSPECTION

Date: 04.07.2022

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802006186
Reference No.	MSKCL/ED/2022 24/00100
Type of Sample	Marine Water
Sampling Location	Along Channel at 10Km
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 03.07.2022
Sampling Done by	Mr. Somaya Ranjan Ghosh

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	116.0	87.0
5	pH	----	APHA (23rd Edition) 4500-H-B	8.04	7.91
6	Electrical Conductivity	us/cm	APHA (23rd Edition) 2510 B	34002.0	34080.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	21552.0	21505.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	182.0	108.0
9	Total dissolved solids	mg/l	APHA (23rd Edition) 2540C	21923.0	17872.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	4907.0	4869.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	688.0	708.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	4218.0	4207.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl B	198.0	199.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition)-4500-O-C/G	5.8	5.1
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	<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	1778.0	1104.0
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 B	<0.5	<0.5
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	<0.5	<0.5
24	Total Chromium	mg/l	APHA (23rd Edition) 3111 B	<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 2025(Part 48)-1994-Reffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994-Reffm:2014	<0.5	<0.5

Prepared By – S. Kanungo

Checked By- 04.07.2022

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TESTING & INSPECTION

Date: 04.07.2022

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4507006186
Reference No.	MSKGL/KD/2022-23/001000
Type of Sample	Marine Water
Sampling Location	Near Kanika Island
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 03.07.2022
Sampling Done by	Mr. Soumya Ranjan Chandal

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (24th Edition) 2120B 2017	<1.0	<1.0
2	Odour	—	APHA (19th Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (19th Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (24th Edition) 2130B	187.0	161.0
5	pH	—	APHA (24th Edition) 4500-H+B	8.22	7.71
6	Electrical Conductivity	us/cm	APHA (24th Edition) 2510 B	32815.0	31186.0
7	Salinity	mg/l	APHA (23rd Edition) 2520B,2017	25047.0	20951.0
8	Total Suspended Solids	mg/l	APHA (23rd Edition) 2540 D	242.0	196.0
9	Total dissolved solids	mg/l	APHA (24th Edition) 2540C	24207.0	29107.0
10	Total Hardness	mg/l	APHA (23rd Edition) 2340B 2017	3881.0	3615.0
11	Calcium Hardness	mg/l	APHA (23rd Edition) 3500-Ca B	947.0	979.0
12	Magnesium Hardness	mg/l	APHA (23rd Edition) 3500-Mg B	2573.0	2425.0
13	Chloride (as Cl)	mg/l	APHA (23rd Edition) 4500-Cl D	13110.0	11300.0
14	Dissolved Oxygen	mg/l	APHA (23rd Edition) 4500-O-C/G	5.4	4.8
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) 5220D,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23rd Edition) 5220D,2017	<1.4	<1.4
18	Dissolved phosphates (as PO4)	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	1741.0	1602.0
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	<0.5	<0.5
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	<0.3	<0.3
24	Total Cyanides	mg/l	APHA (23rd Edition) 4111 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 D	<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;Reffm 2014	<0.001	<0.001
30	Floating material	mg/l	APHA (24th Edition) 5530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39) 1991;Reffm:2014	<0.5	<0.5

Prepared By – S. Kanungo

Checked By- A. K. Das

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MSK
TESTING & INSPECTION

Date: 04.07.2022

PHYTOPLANKTONMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4502006186
Reference No.	MSKGL/ED/2022-23/001000
Type of Sample	Marine Sample (Phytoplankton)
Sampling Location	S1:Dhamra River Mouth S2:Dry Bulk Cargo Berth Face S3:Liquid/Gas/Cyrogenic Berth Face S4:Along Channel at 1Km S5:Along Channel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 03.07.2022
Sampling Done by	Mr. Soumya Ranjan Ghadai

Name of the Parameters		Total count	No of species	Chlorophyll-a	Major Species
Unit		Units/L	Nos.	mg/l	—
Testing Method		APHA 10900	APHA 10200	APHA 10200H	APHA (22nd Edition) 10200
Analysis Result					
S-1	Surface Water	20000	8	0.91	Navicula,Fragilaria
	Bottom water	14500	2	0.66	Enteromorpha Zostera
S-2	Surface Water	23000	6	0.96	Mouscotia, Enteromorpha
	Bottom water	10000	2	0.44	Vallisneria,, Enteromorpha
S-3	Surface Water	24000	5	0.90	Cyclotella, Enteromorpha
	Bottom water	18000	6	0.85	Vallisneria, Mouscotia
S-4	Surface Water	21000	3	0.35	Mouscotia, Fragilaria
	Bottom water	12000	4	0.74	Nematoyctis, Zostera
S-5	Surface Water	19000	3	0.69	Vallisneria, Phormidium
	Bottom water	25000	8	0.49	Enteromorpha, Phormidium
S-6	Surface Water	16000	4	0.72	Phormidium, Calothrix
	Bottom water	19000	6	0.98	Phormidium s, Enteromorpha
S-7	Surface Water	12000	5	0.80	Cyclotella, Phormidium
	Bottom water	23000	3	0.81	Phormidium, Calothrix

Prepared By – S. Ghadai

Checked By- A. K. Dash

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MSK
TRUST INSPECTION

Date: 04.07.2022

ZOOPLANKTONMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4502006186
Reference No.	MSKGL/ED/2022-23/001/000
Type of Sample	Marine Sample (Zooplankton)
Sampling Location	S1:Dhamra River Mouth S2:Dry Bulk Cargo Berth Face S3:Along Channel at 5Km S4:Liquid/Gas/Cryogenic Berth Face S5:Along Channel at 1Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 03.07.2022
Sampling Done by	Mr. Soumya Ranjan Chadar

Name of the Parameters		Total count	No of species	Major Species
Unit		Units/L	Nos.	----
Testing Method		APHA 10700	APHA 10700	APHA (22nd Edition) 10700
Analysis Result				
S-1	Surface Water	None	None	None
	Bottom water	None	None	None
S-2	Surface Water	None	None	None
	Bottom water	1500	1	Daphnia
S-3	Surface Water	None	None	None
	Bottom water	1500	2	Daphnia
S-4	Surface Water	None	None	None
	Bottom water	None	None	None
S-5	Surface Water	1500	1	Daphnia
	Bottom water	None	None	None
S-6	Surface Water	None	None	None
	Bottom water	None	None	None
S-7	Surface Water	None	None	None
	Bottom water	None	None	None

Prepared By – S. Khuntia

Checked By- A. K. Das

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MSK TESTING & INSPECTION

Date: 04.07.2022

MICROBIOLOGICAL MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802006186
Reference No.	MSKGL/HD/2022 23/001000
Type of Sample	Marine Sample (Microbiological)
Sampling Location	S1:Dhamra River Mouth S3:Liquid/Gas/Cryogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Channel at 5Km S6: Along Channel at 10Km S7:Near Kunika Island
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 03.07.2022
Sampling Done by	Mr. Soumya Ranjan Ghadai

Name of the Parameters		Total Bacteria count	Total Coliform	Fecal 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 D	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	84.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom Water	96.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-2	Surface Water	140.0	7.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom Water	220.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-3	Surface Water	60.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	90.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-4	Surface Water	120.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	130.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-5	Surface Water	75.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	55.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-6	Surface Water	90.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	95.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-7	Surface Water	170.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	65.0	4.8	<1.8	<1.8	<1.0	Absent	Absent	Absent

Prepared By – S. Kanungo

Checked By.

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MSK
TEST | INSPECTION

Date: 04.07.2022

PRIMARY PRODUCTIVITYMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802000186
Reference No.	MSKGL/ED/2022-23/001000
Type of Sample	Marine Sample (Productivity)
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 03.07.2022
Sampling Done by	Mr. Soumya Ranjan Chadai

Sl. No.	Monitoring Location		Gross Primary productivity (O2mg/L/day)	Net Primary productivity (O2mg/L/day)
1	S1:Dhamra River Mouth	Surface Water	1.1	0.6
		Bottom water	2.1	1.4
2	S2:Dry Bulk Cargo Berth Face	Surface Water	2.8	2.1
		Bottom water	1.4	1.0
3	S3:Liquid/Gas/Cyrogenic Berth Face	Surface Water	2.0	1.2
		Bottom water	1.1	0.8
4	S4:Along Channel at 1Km	Surface Water	2.2	1.3
		Bottom water	1.2	0.6
5	S5:Along Channel at 5Km	Surface Water	1.7	0.4
		Bottom water	2.1	1.3
6	S6: Along Channel at 10Km	Surface Water	2.6	1.7
		Bottom water	1.9	0.9
7	S7:Near Kunika Island	Surface Water	2.2	1.5
		Bottom water	1.3	0.2

Prepared By –

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MSK TESTING & INSPECTION

Date: 04.07.2022

PHYTO BENTHOSMONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Poalaga, Bhadrak, Odisha
Work Order No.	4802006186
Reference No.	MSKGL/ED/2022-23/001000
Type of Sample	Marine Sample
Sampling Location	S1:Dhamra River Mouth S2:Dry Bulk Cargo Berth Face S3:Along Channel at 5Km S4:Along Channel at 1Km S5: Along Channel at 10Km S6:Liquid/Gas/Cryogenic Berth Face S7:Near Kanika Island
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 03.07.2022
Sampling Done by	Mr. Somaya Ranjan Chadal

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 D	By Calculation (Shannon's Index)	APHA 10500 D
Analysis Result						
S-1	Surface Water	1288	149	6	0.6116	Copepods
	Bottom water	1541	233	14	1.8037	Ctenophora
S-2	Surface Water	2145	264	21	1.0512	N.longaiyana
	Bottom water	1907	163	8	0.0715	Ctenophora
S-3	Surface Water	1225	145	10	0.7109	Ctenophora, Ditylum,
	Bottom water	1959	161	9	0.4005	Podaxira
S-4	Surface Water	2741	236	14	0.9117	Ditylum, Podaxira
	Bottom water	1632	179	9	0.1502	Ditylum, Echinodermata
S-5	Surface Water	1789	201	14	1.7072	Podaxira, Echinodermata
	Bottom water	2564	219	22	1.6014	Ditylum, Echinodermata
S-6	Surface Water	2814	317	42	2.0131	Podaxira, Copepods
	Bottom water	1279	190	10	0.8472	Ctenophora, Podaxira
S-7	Surface Water	1619	117	3	0.4351	Ditylum, Podaxira
	Bottom water	1934	150	11	0.8017	Podaxira N.longaiyana

Prepared By

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MSK TESTING • INSPECTION

Date: 04.07.2022

TOTAL FAUNA MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802006186
Reference No.	MSKC/EID/2022-23/001000
Type of Sample	Marine Sample
Sampling Location	S1:Dhamra River Mouth S3:Liquid/Gas/Cryogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Channel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	29.06.2022
Date of Analysis	29.06.2022 to 04.07.2022
Sampling Done by	Mr. Soumya Ranjan Ghadai

Name of the Parameters		Name of phylum	Class & No. of individuals encountered	Total no of species encountered	Total Fauna per m²
Testing Method		APHA 10700	APHA 10700	APHA 10700	APHA 10700
Analysis Result					
S-1	Surface Water	Annelida, Mollusca	Plychaeta-43,Bivalvia-19	47	182
	Bottom water	Annelida, Mollusca	Plychaeta-70,Bivalvia-19	30	110
S-2	Surface Water	Annelida, Mollusca	Plychaeta-63,Bivalvia-31	61	181
	Bottom water	Annelida, Mollusca	Plychaeta-79,Bivalvia-60	140	374
S-3	Surface Water	Anthropoda, Annelida	Plychaeta-88,Bivalvia-29	92	260
	Bottom water	Annelida, Mollusca	Plychaeta-36,Bivalvia-17	71	210
S-4	Surface Water	Annelida, Mollusca	Plychaeta-50,Bivalvia-26	87	409
	Bottom water	Annelida, Mollusca	Plychaeta-42,Bivalvia-08	50	174
S-5	Surface Water	Annelida, Mollusca	Plychaeta-33,Bivalvia-03	112	287
	Bottom water	Annelida, Mollusca	Plychaeta-89,Bivalvia-76	177	288
S-6	Surface Water	Anthropoda, Annelida	Malagostraca-46,Pelecypoda-21	184	357
	Bottom water	Annelida, Mollusca	Plychaeta-90,Gastropoda-51	179	607
S-7	Surface Water	Anthropoda, Annelida	Malagostraca-21,Pelecypoda-17	39	137
	Bottom water	Anthropoda, Annelida	Plychaeta-32,Gastropoda-12	72	310

Prepared By – S. Ranjan

Checked By-

MSK
TESTING & INSPECTION

Ref: MSKGL/ED/BHU-2022/00800 Date: 04.07.2022

Site Specific Monitored Meteorological Data

For : The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha

Sr. No.	Parameters		June.22
1.	Temperature (°C)	Minimum	26.0
		Maximum	37.8
		Average	31.0
2.	Relative Humidity (%)	Minimum	39.3
		Maximum	90.2
		Average	65.5
3.	Wind Speed (m/s)	Minimum	0.2
		Maximum	13.6
		Average	4.0
4.	Wind Direction (%)	N	6.8
		NNE	5.6
		NE	31.9
		ENE	5.2
		E	6.3
		ESE	8.5
		SE	3.03
		SSE	6.8
		S	7.54
		SSW	8.9
		SW	2.65
		WSW	3.6
		W	9.2
		WNW	2.6
		CALM	1.39
5.	Rainfall (mm)	Total	65.8
		Minimum Day Wise	0.0
		Maximum Day Wise	8.2
		Average	0.09
6.	Ambient Pressure (mm Hg)	Minimum	717.8
		Maximum	758.7
		Average	731.8

(Source – Site Specific Data)

Prepared By S. Yang

Verified By A. K. Dash

EBSR

MONTHLY ENVIRONMENT MONITORING REPORT
MAY- 2022

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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Kolkata – 700016 (West Bengal)

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MSK TESTING & INSPECTION

Report No: BBS/601A

Date: 03.06.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Bhuvana Pearl Company Limited, Dotanga, Bhadrak, Odisha
Work Order No.	4800006186
Reference No.	MSTCGL/T.D/2022 24012200
Type of Sample	Ambient Air Sample
Sampling Location	Colony Area
Sampling Done by	Mr. Somya Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 850), PMS (APM 134) 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)	O₃ (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
01.05.2022	58.40	28.60	6.20	18.70	0.37	15.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
04.05.2022	57.20	27.80	6.10	23.50	0.38	21.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.05.2022	59.80	29.40	7.30	20.20	0.65	20.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.05.2022	56.80	26.70	6.30	18.10	0.48	16.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.05.2022	58.70	27.40	6.00	22.40	0.61	17.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.05.2022	55.20	28.90	6.50	20.50	0.72	14.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.05.2022	56.10	22.30	7.10	19.70	0.46	15.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.05.2022	57.90	25.20	7.00	21.70	0.67	17.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.05.2022	55.70	26.70	6.20	22.30	0.66	15.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	57.68	26.24	7.05	20.73	0.59	18.43	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi NAAQ 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
Method	IS 5182 Part 23:2006 Re (Reaff. 2012)	IS 5182 Part 24:2019	IS 5182 : Part 2:2001 (Reaff. 2017)	IS 5182 : Part 6:2006 (Reaff. 2012)	IS 5182 : Part 10:1999 (Reaff.2019)	IS 5182: Part 25:2018	IS 5182: Part 09:1974	EPA - IO3.3 June,1999	EPA - IO3.4 Jun 06,1999	EPA - IO3.4 Jun 06,1999	IS 5182 Part-17:2018 Reaff.2012	IS 5182 Part-17:2018 Reaff.-2011

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

Prepared By

Checked By

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Report No: BBSK/6028

Date: 05.06.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Bosinga, Bhadrak, Odisha
Work Order No	4802006186
Reference No.	MSK/EI/KD/2022-23/02200
Type of Sample	Ambient Air Sample
Sampling Location	Kanak Prasad Village
Sampling Done by	Mr. Sourav Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 460), FPS (APM 430) Low Envirotech, CO Analyzer & VOC Sampler

Date	PM10 (ug/m³)	PM2.5 (ug/m³)	SO2 (ug/m³)	NOx (ug/m³)	CO (mg/m³)	NH3 (ug/m³)	O3 (ug/m³)	Pb (ug/m³)	Ni (ug/m³)	As (ng/m³)	C6H6 (ug/m³)	BaP (ng/m³)
01.05.2022	48.10	24.60	6.90	21.40	0.47	17.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
04.05.2022	37.40	26.80	6.70	22.70	0.69	24.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.05.2022	46.70	25.10	7.10	23.80	0.58	22.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.05.2022	54.00	27.30	6.80	20.60	0.68	26.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.05.2022	46.50	24.10	7.70	20.40	0.75	16.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.05.2022	50.60	23.30	6.40	19.20	0.67	14.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.05.2022	54.20	25.20	7.10	23.50	0.66	25.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.05.2022	39.90	28.70	6.90	22.80	0.51	17.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.05.2022	48.30	26.90	7.60	25.20	0.64	21.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	53.29	25.62	6.99	24.10	0.67	20.40	<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 4183: Part 23:2018 (Reaff. 2012)	IS 5182: Part 24:2019	IS 5182: Part 2 :2001 (Reaff. 2017)	IS 5182: Part 6 :2006 (Reaff 2017)	IS 5182: Part 10 :1999 (Reaff.2014)	IS 5182: Part 25:2019	IS 5182: Part 09:1974	EPA - IO3.4(6 nr.1999	EPA - IO3.4(6 nr.1999	EPA - IO3.4(6 nr.1999	IS:5182(Part-111:2006 Reaff.2012	IS:5182(Part- 12):2004 Reaff.2011

N.B.: NAAQ: National Ambient Air Quality Standard as per 18th Nov. 2009 Govt. Notification

Prepared By – S. Kanungo

Checked By-

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MSK TESTING • INSPECTION

Report No: BBS/603C

Date: 03.06.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4800000136
Reference No.	MSKGL/ED/2022-23/02200
Type of Sample	Ambient Air Sample
Sampling Location	Near EMH
Sampling Done by	Mr. Sumona Ranjan Chudal
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), TPS (APM 15-1) Low Volumes, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (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)	Ref (mg/m³)
01.05.2022	61.70	31.60	7.70	24.60	0.67	20.50	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
04.05.2022	54.90	27.30	9.10	20.90	0.81	22.40	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
08.05.2022	52.40	25.40	6.50	22.10	0.49	17.70	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
11.05.2022	58.70	28.00	7.80	26.90	0.71	20.00	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
15.05.2022	50.70	23.50	6.90	24.10	0.61	20.60	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
18.05.2022	48.80	23.60	8.10	24.50	0.70	19.40	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
22.05.2022	57.60	28.00	7.40	22.10	0.77	17.10	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
25.05.2022	60.70	31.70	8.90	20.40	0.43	20.20	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
29.05.2022	54.40	27.10	7.40	23.10	0.62	16.10	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
Monthly Average	56.83	27.57	7.75	23.19	0.69	20.88	<20.0	<0.01	<5.0	<1.0	<0.7	<0.5
CPCB New (NAAQ) 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 23:2018 (Reaff. 2017)	IS 5182: Part 24:2019	IS 5182 : Part 2 :2001 (Reaff :2017)	IS 5182 : Part 6 :2006 (Reaff :2017)	IS 5182 : Part 10 :1999 (Reaff.2014)	IS 5182: Part 25:2018	IS 5182: Part 09:1974	EPA - IO3.4 June, 1999	EPA - IO3.4Jun.1999	EPA - IO3.4Jun.1999	IS:5182 (Part-11):2006 Reaff.2017	IS:5182 (Part-12):2004 Reaff.2014

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

Prepared By

Checked By

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[CIN: U51209WB1999PTC093037]

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Report No: BBS/6040

Date: 03.06.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Bateinga, Bhadrak, Odisha**
Work Order No.	**4800006186**
Reference No.	**MSKGL/ED/2022-23/02700**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Near Jetty**
Sampling Done by	**Mr. Soumya Ranjan Ghadei**
Sampling Duration	**24hrs**
Monitoring Instrument	**RDS (APM 880), FPS (APM 194) Lata Envirotech, CO Analyzer & VOC Sampler**

Date	PARAMETERS											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (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)
01.05.2022	62.30	42.90	6.90	20.70	0.65	30.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
04.05.2022	51.50	27.60	7.20	22.00	0.77	27.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.05.2022	60.20	32.40	7.60	25.60	0.61	34.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.05.2022	58.80	27.20	8.00	27.00	0.72	26.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.05.2022	50.00	24.70	6.70	24.80	0.67	21.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.05.2022	56.20	29.90	7.00	26.20	0.84	31.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.05.2022	50.40	24.60	8.70	24.10	0.72	33.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.05.2022	63.20	23.60	6.70	20.00	0.61	29.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.05.2022	57.10	27.20	7.50	24.50	0.79	23.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	57.90	28.01	7.42	26.39	0.71	27.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, NAAQ (Ind AQ) 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 26:2018	IS 5182: Part 09:1974	EPA - IO-3.4 June, 1999	EPA - IO3.4Jun ne,1999	EPA - IO3.4Jun ne,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 Gen. Notification

Prepared By - S. Kanungo

Checked By - Ananta Kumar Dutta

Mitra S. K. Private Limited

MSK TESTING • INSPECTION

N-9/700, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U01903WB1956PTC023037]

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Report No: **BBS/005II**

Date: **03.06.2022**

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	**M/s The Dhamra Port Company Limited, Dodiapa, Bhadrak, Odisha**
Work Order No.	**4502006186**
Reference No.	**MSKCGL/ED/2022-23/07/01**
Type of Sample	**Ambient Air Sample**
Sampling Location	**Dodiapa Village**
Sampling Done by	**Mr. Sameera Ranjan Ghadai**
Sampling Duration	**24hrs**
Monitoring Instrument	**RDS (APM 860), FPS (APM 430) 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)	Ozone (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C_6H_6 (µg/m³)	BaP (ng/m³)
01.05.2022	33.30	27.70	6.80	20.70	0.48	14.80	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
04.05.2022	48.10	24.20	7.20	25.80	0.36	17.20	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
08.05.2022	34.70	26.50	6.40	22.30	0.61	21.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.05.2022	53.30	28.80	6.90	23.40	0.54	12.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.05.2022	47.60	28.10	7.00	22.10	0.47	14.60	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
18.05.2022	32.80	22.40	6.30	18.70	0.71	14.10	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
22.05.2022	57.10	24.20	8.40	20.80	0.70	16.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.05.2022	50.70	26.60	7.10	27.40	0.62	20.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.05.2022	38.00	21.00	7.30	21.80	0.53	14.90	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
Monthly Average	54.21	28.48	7.19	24.99	0.57	18.73	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB NAAQ Prescribed 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 2017)	IS 5182 : Part 6 :2006 (Reaff 2017)	IS 5182 : Part 10 :1999 (Reaff 2014)	IS 5182: Part 26:2018	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

Checked By- Ananta Kumar Pradhan

Mitra S. K. Private Limited

N-8/100, Ground Floor
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[CIN: U74900WB1993PTC062087]

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Report No: 005/006F

Date: 03.06.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Bhamra Port Company Limited, Bonuga, Bhadrak, Odisha
Work Order No.	4500006186
Reference No.	MSKGL/EO/2022-23/0300
Type of Sample	Ambient Air Sample
Sampling Location	Near Bhitarkanika
Sampling Done by	Mr. Soumya Ranjan Ghadai
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETER											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (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)
01.05.2022	37.80	34.40	7.80	20.70	0.56	17.00	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
08.05.2022	37.10	28.10	6.40	24.40	0.64	21.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
09.05.2022	48.70	24.00	6.30	27.30	0.47	17.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
11.05.2022	37.30	37.40	7.90	19.60	0.62	26.00	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
15.05.2022	35.70	27.90	6.80	12.20	0.50	13.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
18.05.2022	48.70	26.10	8.10	17.10	0.66	15.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
22.05.2022	37.40	33.30	7.70	24.60	0.72	20.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
25.05.2022	31.60	22.70	6.30	20.20	0.42	24.60	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
29.05.2022	32.30	32.90	7.60	28.40	0.87	19.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	51.60	26.45	6.99	21.32	0.61	18.97	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB Notified NAAQ 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 23:2018 (Reaff. 2012)	IS 5182: Part 24:2019	IS 5182: Part 2:2001 (Reaff. 2012)	IS 5182: Part 6:2006 (Reaff. 2017)	IS 5182: Part 10:1999 (Reaff.2014)	IS 5182: Part 24:2018	IS 5182: Part 09:1974	EPA - IO3.4 June, 1999	EPA - IO3.4June,1999	EPA - IO3.4June,1999	IS:5182 (Part-11):2006 Reaff.2017	IS:5182 (Part-12):2004 Reaff.. 2014

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

Prepared By

Checked By-

Mitra S. K. Private Limited
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Bhubaneswar - 751015
[CIN: U51909WB1990PTC049037]

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MSK TESTING+INSPECTION

TEST REPORT

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

Report No. : BBS/607
Date : 03.06.2022
Sample No. : MSKGL/ET/2022-23/05/01987
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg. dB(A)
1.	01.05.2022	Stack Yard	80.7	42.5	70.3
2.	04.05.2022	Wagon Tipplor	84.5	48.1	78.2
3.	05.05.2022	Near Silo	73.8	40.6	60.5
4.	08.05.2022	Near Stacker & Reclaimer	71.2	39.5	63.8
5.	11.05.2022	Project Area	81.8	45.3	71.5
6.	12.05.2022	Transfer Point	86.3	52.4	80.6
7.	15.05.2022	Workshop	84.5	49.2	76.3
8.	16.05.2022	Steel Yard	88.2	54.3	83.7
9.	18.05.2022	PCC Shed	79.4	52.3	77.3
10.	26.05.2022	Near Port Canteen	75.6	44.2	68.3

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

N-9/180, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U51909WB1958PTC022037]

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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/606
Date : 03.06.2022
Sample No. : MSKGT/ID/2022-23/05/01300
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No.	Sampling Date	Sampling Location	Day Leq. Time dB(A)		Night Time Leq. dB(A)	
			Results	LIMIT	Results	LIMIT
1.	02.05.2022	Colony Area (R)	42.7	55	36.5	45
2.	03.05.2022	Kunik Prasad Village (R)	40.2	55	38.8	45
3.	07.05.2022	Near BMH (I)	71.1	75	52.8	70
4.	21.05.2022	Near Jetty (I)	73.8	75	63.7	70
5.	10.05.2022	Dosinga Village (R)	54.3	55	43.1	45
6.	24.05.2022	Near Bhitarkanika (Eco Sensitive Zone)	42.7	50	36.2	40

Noise Limit as per CPCB

Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

NOTE :
Day Time : 06.00 Hr.-22.00 Hr.
Night Time:22.00 Hr.-06.00 Hr.

Report Prepared by:

BBSR

For Mitra S. K. Private Limited
Authorized Signatory

Mitra S. K. Private Limited

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U51109WB1982PTC033037]

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MSK TESTING

Ref : MSKGL/FD/2022-23/000566

Date : 03.06.2022

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4500386186
Reference No.	MSKGL/FD/2022-23/000566
Type of Sample	Piezometric Well
Sampling Done by	Mr. Soumya Ranjan Ghadai

GROUND WATER LEVEL MONITORING REPORT

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	16.05.2022	11.82
2	Near WTP	16.05.2022	10.40

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 - 751016
(CIN: U51909WB1956PTC023037)

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MSK
TEST | INSPECTION

TEST REPORT

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

Report No. : 888/611
Date : 05.06.2022
Sample No. : MSKGLJFD/2022-23/05/01095
Date of sampling : 16.05.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 70° C)	—	6.5 – 8.5	No Relaxation	IS 3025 (Part 11) 1983 R(Re): 2017	7.57
2.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 R(Re): 2014	53.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 R(Re): 2012	40.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 37) 2003 RA 2014	BDL(DL:0.001)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 47) 2003 RA 2014	BDL(DL:0.001)
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 R(Re): 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 41) 2003 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39)-1991 R(Re): 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 R(Re): 2015	BDL(DL:0.2)
12.	Colour	Hazen	5	15	IS 3025 (Part 4)-1983 R(Re):2017	BDL(DL:1.0)
13.	Odour		Agreeable	Agreeable	IS 3025 (Part 5)- 1988 R(Re):2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 R(Re): 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 R(Re):2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 R(Re): 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 R(Re): 2014	74.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; R(Re):2012	320.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 R(Re): 2014	160.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 5) 2003 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 R(Re): 2014	24.0
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2015	184.0
23.	Boron (as B)	mg/l	0.1	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 R(Re): 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; R(Re): 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.	Sulfate	mg/l	—	—	IS 3025 (Part 24)- 2015	51.6

Continuation Sheet

MSK
TESTING & INSPECTION

Ref. No. RKS/611

Date- 05.06.2023

32.	Sulphide (as H2S)	mg/l	0.02	No Relaxation	IS 3025 (Part 29)- 1991 R (Re: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34) 1988, Reffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Reffm: 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27), 1986 Reffm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.01)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (24th Edn.) 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:

For Mitra S. K. Private Limited.

Amarta Kumar Dutta
Authorized Signatory

Mitra S. K. Private Limited

N/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U51909WB1994PTC062037]

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MSK TESTING INSPECTION

TEST REPORT

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

Report No. : BRS/012
Date : 03.06.2022
Sample No. : MSKOL/FD/2022-23/05/01094
Date of sampling : 16.05.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP
Sampling Done By : Mr. Soumya Ranjan Chadar

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	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 70° C)	---	6.5 – 8.5	No Relaxation	IS 3025 (Part 11)-1984 Reffm: 2017	7.66
2.	Sulphate (as SO4)	mg/l	200	400	IS 3025 (Part 24) 1986 Reffm: 2014	58.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Reffm: 2014	31.0
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) 2001 RA 2014	BDL(DL:0.07)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.07)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Reffm: 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 Reffm: 2014	BDL(DL:0.2)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Reffm: 2017	BDL(DL:0.3)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Reffm:2017	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Reffm:2017	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10) 1984 Reffm: 2017	BDL(DL:1.0)
15.	Residual Free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26) 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)- 2003 Reffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32) 1988 Reffm: 2014	32.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Reffm:2017	318.0
19.	Alkalinity (as CaCO3)	mg/l	200	600	IS 3025 (Part 23)- 1986 Reffm: 2017	172.0
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 Reffm: 2014	27.0
22.	Total Hardness (as CaCO3)	mg/l	200	600	IS 3025 (Part 21)-2015	172.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.5)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.07)
25.	Nitrate (as NO3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Reffm: 2014	BDL(DL:0.3)
26.	Phenolic Compounds (as C6H5OH)	mg/l	0.001	0.002	IS 3025 (Part 43) 1992; Reffm: 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.	Sulphide	mg/l	---	---	IS 3025 (Part 14)- 2013	24.0

Continuation Sheet

MSK
TESTING INSPECTION

Ref. No. BDS/612 **Date- 03.06.2022**

31.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Reffm: 2014	BDL(DL:0.05)
32.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Reffm: 2014	BDL(DL:0.1)
33.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Reffm: 2014	BDL(DL:0.1)
34.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 4826 (Part 2) 2004 RA 2014	BDL(DL:0.01)
35.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Reffm: 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 (20th Edn.) 6410C	BDL(DL:0.0001)
38.	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 : DOSINTA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BRS/613
Date : 03.06.2022
Sample No. : MSKGL/FD/2022/23/03/01095
Date of sampling : 16.05.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Soumya Ranjan Ghadai

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 25° C)		6.5 - 8.5	No Relaxation	IS 3025 (Part 11) 1984 Reffm: 2012	7.89
2.	Turbidity (as NTU)	mg/l	200	400	IS 3025 (Part 10) 1984 Reffm: 2014	62.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Reffm: 2014	49.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 37) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 37) 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 Reffm: 2014	BDL(DL:0.0002)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 37) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39) 1991 Reffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Reffm: 2012	BDL(DL:0.2)
12.	Odour	Hexom	3	12	3025 (Part 4)-1983: Reffm:2017	Not Detected
13.	Colour	----	Agreeable	Agreeable	IS 3025 (Part 4) 1983 Reffm: 2012	Agreeable
14	Turbidity	NTU	1	5	IS 3025 (Part 10)-1984 Reffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Reffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32) 1988 Reffm: 2014	94.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984: Reffm:2012	357.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Reffm: 2014	132.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.01)
21	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Reffm: 2014	22.0
22.	Total Hardness (as $CaCO_3$)	mg/l	300	600	IS 3025 (Part 21)-2013	158.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.5)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Reffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43) : 1992, Reffm: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.01)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l		----	IS 3025 (Part 14)- 2013	100

Continuation Sheet

MSK
TESTING & INSPECTION

Ref. No. BDS/613

Date- 03.06.2022

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991, R(Re. 2014	BDL(DL:0.02)
33	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34) 1988; R(Re: 2014	BDL(DL:0.1)
34.	Cyanide(as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 26)- 1986; R(Re. 2014	BDL(DL:0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2) 2004 RA 2011	BDL(DL:0.01)
36	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 R(Re: 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 (22nd 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

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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. : BB3/602
Date : 03.06.2022
Sample No. : MSKGIL/ED/2022-23/05/00701
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 01.05.2022

ANALYSIS RESULT

Sln No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23rd Edition) 4500 H-B	6.91	7.74
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	337.0	12.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	98.0	3.4
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	313.0	10.8
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220D 2017	20.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	24.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reaff.2014	38.0	2.5
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2900.0	90.0

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/604
Date : 03.06.2022
Sample No. : MSKGL/ED/2022-23/05/01951
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 22.05.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	-	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 30°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H B	6.78	7.18
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	197.0	5.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	32.0	3.6
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	220.0	19.2
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	6.0	<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 11684 (1999); Rflm:2014	36.0	1.7
11.	Fascal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2500.0	69.0

Report Prepared by:

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 : DOBINTA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/607
Date : 03.06.2022
Sample No. : MSK/GI/TD/2022-23/05/07/03
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 01.05.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen		APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	—	—	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	—	6.5 - 9.0	APHA (23rd Edition) 4500 H-B	6.95	7.42
4.	Appearance	—	—	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	568.0	10.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	110.0	4.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	305.0	11.4
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	28.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3 F 2017	56.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reffm:2014	41.0	3.2
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2200.0	79.0

Report Prepared by:

BBSR

For Mitra S. K. Private Limited
Ananta Kumar Dutta
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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/614
Date : 03.06.2022
Sample No. : MSKGL/ED/2022-23/05/00703
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 01.05.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.89	7.18
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<30.0	APHA (23rd Edition) 2540D	248.0	12.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	120.0	4.3
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	340.0	17.4
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	18.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	22.0	1.8
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1900.0	49.0

Report Prepared by:

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 : DORINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/615
Date : 04.06.2022
Sample No. : MSKGL/LD/2022-23/05/01933
Sample Description : EFFLUENT WATER
Sampling Location : STP 35KLD
Date of sampling : 27.05.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	–	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	—	–	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	—	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.62	7.32
4.	Appearance	—	–	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	160.0	4.8
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	60.0	2.6
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	230.0	8.4
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	37.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	48.0	1.0
11.	Fecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	7600.0	78.0

Report Prepared by:

BBSR

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/605
Date : 07.06.2022
Sample No. : MSKKL/ED/2022-23/05/01955
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 22.05.2022

ANALYSIS RESULT

Sln. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 28°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H+B	6.68	7.44
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	158.0	6.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	42.0	3.8
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	110.0	11.2
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	20.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reaffirm2014	32.0	2.1
11.	Fecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1400.0	58.0

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 : DOSINGIA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/608
Date : 06.06.2022
Sample No. : MSKGL/LD/2022-23/05/00707
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 01.05.2022

ANALYSIS RESULT

Sl.No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	–	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	—	–	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	—	6.5 – 9.0	APHA (23rd Edition) 4500 H+B	6.78	7.39
4.	Appearance	—	–	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	135.0	13.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	76.0	6.4
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	301.0	20.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	9.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500 NH3-F 2017	34.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999): Reaffirm.2014	15.0	2.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	1100.0	90.0

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 : DOSINGIA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/609
Date : 07.06.2022
Sample No. : MSKCH/HO/2022-23/05/01957
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 27.05.2022

ANALYSIS RESULT

Sl. No.	Test Parameter	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	–	APHA (23rd Edition) 2120B 2017	Bluekish	Colourless
2.	Odour	—	–	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	—	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.77	7.28
4.	Appearance	—	–	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	197.0	10.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	70.0	7.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	388.0	32.1
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	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	42.0	2.6
11.	Fecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2000.0	55.0

Report Prepared by:

BBSR

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. : BDS/616
Date : 07.06.2022
Sample No. : MSKGL/ED/2022-23/03/01600
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 03.06.2022

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	5781.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.87
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	312.0
5.	Melamine content	%	Lab Method	18.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	9471.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2011	697.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	45.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	21.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	310.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	428.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1997.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	697.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	27.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	15.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	18.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	334.0

Continuation Sheet

MSK

Ref. No. DDS/616

Date- 03.06.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	7.4
19.	Boron (as B)	mg/kg	IS 13428- 2005 Annex H	<2.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	2800.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	37.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999): R(Re 2014	427.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	412.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 D - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	35.0
27.	Silt	%	TPM/MSK/P&E/1/36A	28.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	37.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungi (Phytobenthos)	CFU/g dry wt	1788
2.	Total count (Phytobenthos)	20 mg wet sediment	264
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	1.92
5.	Major Species (phytobenthos)	----	*Cocchineidiscus sp., Sirhulphia mobilensis, Navicula clostorium*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-58,Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	22
9.	Total fauna (Fauna)	per m^2	170

Report Prepared by:

BBSR

For Mitra S.K. Private Limited

Authorised 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: DOSINGIA, PO: DHAMRA
DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/617
Date : 03.06.2022
Sample No. : MSK/OL/FD/2022-23/05/01601
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 03.05.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;RAu:2011	7.88
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;RAm:2006	6772.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; RAm:2015	0.87
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	217.0
5.	Moisture content	%	Lab Method	37.0
6.	Chloride (as Cl-)	mg/kg	TPM/MSK/P&E/1/10	3224.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	674.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/13	<3.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	187.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/12	82.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	4112.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	510.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	14.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	20.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	31.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	426.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BBS/617

Date- 03.06.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	7.1
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	5477.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	32.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999), Rffm:2014	480.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/63	497.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 D - Dec, 1996, 8270 D Feb 2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.1
26.	Sand	%	TPM/MSK/P&E/1/36A	40.0
27.	Silt	%	TPM/MSK/P&E/1/36A	35.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	25.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1588
2.	Total count (Phytobenthos)	50 mg wet sediment	268
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	----	1.68
5.	Major Species (phytobenthos)	----	*Rhizosolenia robusta, Navicula clementum*
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Phylum-11, Bivalvia-10
8.	Total no. of species encountered (Fauna)	Nos.	12
9.	Total fauna (Fauna)	per m²	177

Report Prepared by:

BBSR

For Mitra S.K. Private Limited

Authorised 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/618
Date : 03.06.2022
Sample No. : MSK/GL/BD/2022-23/05/02100
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 17.05.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;RReaffirm:2011	7.45
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;RReaffirm:2006	4507.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; RReaffirm:2015	0.91
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	998.0
5.	Moisture content	%	Lab Method	40.0
6.	Chloride (as Cl-)	mg/kg	TPM/MSK/P&E/1/10	4220.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977;RA 2015	710.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/13	<3.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	9.7
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	121.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	49.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/5	2564.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	589.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	17.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	14.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	28.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	417.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BBSR/618

Date- 04.06.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	10.1
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminum (as Al)	mg/kg	EPA 6010D	6802.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	31.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	150.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	321.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec. 1996, 8270 D - Feb. 2007	<1.0
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	42.0
27.	Silt	%	TPM/MSK/P&E/1/36A	38.0
28.	Texture	Nom	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	20.0

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungal (Phytobenthos)	CFU/g dry wt.	1654
2.	Total count (Phytobenthos)	50 mg wet sediment	260
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	1.91
5.	Major Species (phytobenthos)	---	*Bidulphia mobiliensis, Spirulina oscraphina*
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Plychaeta-55,Bivalvia-29
8.	Total no. of species encountered (Fauna)	Nos.	30
9.	Total fauna (Fauna)	per m^2	291

Report Prepared by:

BBSR

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. : 1185/619
Date : 02.06.2022
Sample No. : MSKOL/ED/2022-23/02/02101
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 17.05.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;RAffm:2011	7.98
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;RAffm:2006	3117.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Raffm:2015	1.2
4.	Turbidity	N T U	APHA (23rd Edition) 2130B	274.0
5.	Moisture content	%	Lab Method	36.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2800.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977;RA 2015	512.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<5.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	180.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	330.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1607.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	250.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	25.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	14.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	22.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	190.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. 888/619

Date- 05.06.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	11.4
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex II	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	2102.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	17.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999), Reffm:2014	341.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	214.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 D - Dec, 1996, 8270 D - Feb,2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	32.0
27.	Silt	%	TPM/MSK/P&E/1/36A	41.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	27.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt	1356
2.	Total count (Phytobenthos)	50 mg wet sediment	275
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	—	1.96
5.	Major Species (phytobenthos)	—	*Gymnogyne* sp., *Navicula dicrena*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Polychaeta-66,Bivalvia-25
8.	Total no. of species encountered (Fauna)	Nos.	21
9.	Total fauna (Fauna)	per m²	197

Report Prepared by:

For Mitra S.K. Private Limited

Authorised Signatory

Continuation Sheet

MSK TESTING & INSPECTION

Ref: MSKGL/ED/RHU-2021/01300

Date: 03.06.2022

Site Specific Monitored Meteorological Data

For : The Dhamra Port Company Limited, Dosiugo, Bhadrak, Odisha

Sr. No.	Parameters		May.22
1.	Temperature (°C)	Minimum	23.0
		Maximum	42.7
		Average	31.1
2.	Relative Humidity (%)	Minimum	22.5
		Maximum	95.5
		Average	83.8
3.	Wind Speed (m/s)	Minimum	0.0
		Maximum	20.0
		Average	4.9
4.	Wind Direction (%)	N	5.8
		NNE	11.8
		NE	6.9
		ENE	3.5
		E	1.64
		ESE	8.1
		SE	26.5
		SSE	2.45
		S	10.3
		SSW	3.3
		SW	2.9
		WSW	3.2
		W	5.1
		WNW	7.4
		CALM	1.21
5.	Rainfall (mm)	Total	46.7
		Minimum Day Wise	0.0
		Maximum Day Wise	8.0
		Average	0.06
6.	Ambient Pressure (mm Hg)	Minimum	747.8
		Maximum	758.7
		Average	751.8

(Source – Site Specific Data)

Prepared By

Verified By

MONTHLY ENVIRONMENT MONITORING REPORT
APRIL- 2022

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: BBSR/900A

Date: 04.05.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dobinge, Bhadrak, Odisha
Work Order No.	4800200136
Reference No.	MSKGL/EH/0071-22/001800
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 194) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PM$_{10}$ (µg/m³)	PM$_{2.5}$ (µg/m³)	SO$_2$ (µg/m³)	NO$_2$ (µg/m³)	CO (mg/m³)	NH$_3$ (µg/m³)	O$_3$ (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C$_6$H$_6$ (µg/m³)	BaP (ng/m³)
	PARAMETERS											
03.04.2022	59.80	28.60	6.48	18.03	0.64	14.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.04.2022	50.20	25.90	7.37	24.20	0.74	18.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.04.2022	56.50	26.30	7.60	22.30	0.59	21.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.04.2022	60.90	28.60	6.61	17.20	0.64	14.90	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.04.2022	52.20	25.90	7.34	22.14	0.64	20.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.04.2022	50.10	27.80	7.82	22.50	0.60	21.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.04.2022	44.50	24.90	6.22	21.15	0.80	18.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.04.2022	57.70	27.20	7.61	20.88	0.62	20.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	55.15	26.40	7.14	21.44	0.59	18.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
CPCB, New Delhi NAQ Standard	100	60	80	80	4	400	180	1	20	6	5	1
24 Hrs Weighted Average (hrs)	24	24	24	24	1	24	1	24	Annual	Annual	Annual	Annual
TEST METHOD	IS 5182: Part 23:2006 Re (Reaff 2012)	IS 5182: Part 24:2017	IS 5182: Part 2 :2001 (Reaff: 2017)	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 - IO3.4Jan ure.1999	EPA - IO3.4Jan ec.1999	EPA - IO3.4Jan ec.1999	IS 5182: Part 11:2006 Reaff:2017	IS 5182: Part 14:2000 Reaff: 2014

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

Prepared By – S. Kanungo

BBSR

Checked By-

Mitra S. K. Private Limited

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MSK
TESTING & INSPECTION

Report No: BBS/008

Date: 04.05.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dostinga, Khodrak, Odisha
Work Order No.	4002006186
Reference No.	MSKGL/ED/207-22/001800
Type of Sample	Ambient Air Sample
Sampling Location	Kunak Prasad Village
Sampling Done by	Mr. Kunja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 850), FPS (APM 430) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETER											
	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)	CO (mg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	CdHg (ng/m³)	Dioxin (ng/m³)
03.04.2022	56.40	27.80	7.74	20.20	0.66	20.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
09.04.2022	59.40	26.40	8.27	22.10	0.81	18.18	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.04.2022	60.20	28.40	7.28	18.20	0.51	19.03	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
12.04.2022	54.10	26.60	7.10	22.30	0.61	23.37	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.04.2022	57.40	24.80	6.40	18.30	0.58	12.82	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.04.2022	52.80	25.60	6.25	24.70	0.60	27.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.04.2022	60.30	27.80	7.28	22.20	0.48	15.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.04.2022	59.10	29.40	6.27	19.50	0.19	15.16	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	57.46	70.60	6.91	70.63	0.84	19.06	<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 24:2001	IS 5182: Part 2 :2001 (Reaff: 2012)	IS 5182: Part 6 :2006 (Reaff. 2012)	IS 5182: Part 10 :1999 (Reaff.2014)	IS 5182: Part 24:2001	IS 5182: Part 09:1974	EPA - IO3.4Jun 08.1999	EPA - IO3.4Jun ne.1999	EPA - IO3.4Jun 08.1999	IS:5182 Part-11:2006 Reaff.2012	IS:5182 Part-23:2004 Reaff:2014

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

Prepared By – S. Kanungo

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MSK TESTING & INSPECTION

Report No: BBS/006C

Date: 01.05.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dodinga, Bhadrak, Odisha
Work Order No.	4803006186
Reference No.	MSKGL/EID/2020-21/001800
Type of Sample	Ambient Air Sample
Sampling Location	Near RMH
Sampling Done by	Mr. Kunja Behari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 850), FPS (APM 430) Lata Envirotech, CO Analyser & VOC Sampler

Date	PARAMETERS											
	PM_{10} (ug/m³)	$PM_{2.5}$ (ug/m³)	SO_2 (ug/m³)	NO_x (ug/m³)	CO (mg/m³)	NH_3 (ug/m³)	O_3 (ug/m³)	Pb (ug/m³)	Ni (ug/m³)	As (ug/m³)	C_6H_6 (ug/m³)	BaP (ng/m³)
03.04.2022	54.00	27.00	7.84	20.30	0.80	24.13	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
06.04.2022	60.40	30.20	6.19	20.30	0.74	22.47	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
10.04.2022	58.40	32.40	7.17	16.70	0.50	19.13	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
14.04.2022	63.60	28.09	8.04	18.40	0.70	20.44	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
17.04.2022	54.20	28.56	6.63	24.40	0.61	27.01	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
20.04.2022	50.60	24.60	8.18	22.30	0.78	23.66	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
24.04.2022	55.20	27.60	7.35	24.10	0.71	20.13	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
27.04.2022	67.40	28.60	6.42	19.40	0.72	20.19	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
Monthly Average	57.20	28.20	7.40	21.46	0.71	23.22	<20.0	<0.01	<5.0	<1.0	<1.2	<0.5
CPCB, Notified 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 - IO3.3Jun e,1999	EPA - IO3.3Jun e,1999	IS-5182 (Part 11):2006 Reaff.2012	IS-5182 (Part-17)-2014 Reaff.: 2014

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

Prepared By – S. Kanungo

Checked By.

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MSK TESTING & INSPECTION

Report No. 8653/209D

Date: 04.06.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	180/0006156
Reference No.	MSKGL/SH/2021-22/001500
Type of Sample	Ambient Air Sample
Sampling Location	Near Jetty
Sampling Done by	Mr. Kunja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 960), FPS (APM 154) Leo Envirotech, CO Analyzer & VOC Sampler

Date	PARAMETERS											
	$PM_{2.5}$ (µg/m³)	PM_{10} (µg/m³)	SO_2 (µg/m³)	NO_2 (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)
03.04.2022	38.40	28.90	8.00	24.70	0.69	28.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.04.2022	71.60	35.10	8.40	28.00	0.74	26.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.04.2022	60.30	40.90	7.50	28.60	0.79	27.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.04.2022	66.80	42.70	6.80	26.40	0.72	21.50	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.04.2022	57.10	23.70	7.40	22.80	0.63	20.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.04.2022	31.50	49.10	7.10	22.30	0.60	18.70	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.04.2022	61.30	37.20	7.20	28.50	0.77	20.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.04.2022	55.10	78.10	6.10	24.60	0.55	23.30	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	60.10	37.47	7.40	25.40	0.67	23.00	<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	0	5	1
Time Weighted Average (hrs.)	24	24	24	24	1	24	1	24	Annual	Annual	Annual	Annual
TEST METHOD	IS 5182, Part 24:2019 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 - 101.4 June, 1990	EPA - IO3.4June, 1999	EPA - IO3.4June, 1999	IS:5182 (Part-11):2006 Reaff 2012	IS:5182 (Part-12):2004 Reaff, 2014

N.B. *NAAQs National Ambient Air Quality Standards as per 18th Nov. 2009 Gnt. Notification

Prepared By

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MSK TESTING & INSPECTION

Report No: BDS/0001

Date: 04.05.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Bosinga, Bhadrak, Odisha
Work Order No.	4800206138
Reference No.	MSKGH/ED/2021-22/001800
Type of Sample	Ambient Air Sample
Sampling Location	Bosinga Village
Sampling Done by	Mr. Ranja Bihari Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 850), FPS (APM 154) Lata Envirotech, CO Analyzer & VOC Sampler

Date	PM10 (ug/m³)	PM2.5 (ug/m³)	SO2 (ug/m³)	NOx (ug/m³)	CO (mg/m³)	NH3 (ug/m³)	O3 (ug/m³)	Pb (ug/m³)	Ni (ng/m³)	As (ng/m³)	C6H6 (ug/m³)	BaP (ng/m³)
	PARAMETERS											
03.04.2022	64.01	30.40	7.24	22.70	0.33	18.23	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.04.2022	52.70	25.20	6.98	17.80	0.49	12.52	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.04.2022	59.70	27.50	7.14	20.20	0.56	17.41	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.04.2022	50.40	24.80	6.52	19.40	0.60	13.51	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.04.2022	67.30	29.10	6.31	25.18	0.40	21.09	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.04.2022	55.20	23.10	7.43	18.50	0.30	14.22	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.04.2022	48.30	24.40	6.81	22.80	0.55	22.22	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.04.2022	56.20	27.60	7.14	23.70	0.72	18.40	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	50.12	26.36	6.95	21.38	0.57	17.87	<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. 2017)	IS 5182: Part 24:2019	IS 5182 : Part 2 :2001 (Reaff. 2012)	IS 5182 : Part 6 :2006 (Reaff. 2017)	IS 5182 : Part 10 :1999 (Reaff.2014)	IS 5182: Part 38:2018	IS 5182: Part 09:1974	EPA - IO3.1 June, 1999	EPA - IO3.4 June, 1999	EPA - IO3.3 June, 1999	IS:5182 (Part-11):2006 & Reaff.2012	IS:5182 (Part-17):2009 & Reaff., 2014

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

Prepared By – S. Ranjan

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MSK
TECHNO INSPECTION

Report No. RBS/900F

Date: 01.05.2022

AMBIENT AIR QUALITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dostenga, Bhadrak, Odisha
Work Order No.	4502006188
Reference No.	MSKGL/EH/2021-22/001800
Type of Sample	Ambient Air Sample
Sampling Location	Near Bhitarkanika
Sampling Done by	Mr. Konja Robert Nayak
Sampling Duration	24hrs
Monitoring Instrument	RDS (APM 860), TPS (APM 154) Lab Envirotech, CO Analyzer & VOC Sampler

Date	PM10 (µg/m³)	PM2.5 (µg/m³)	SO2 (µg/m³)	NOx (µg/m³)	CO (mg/m³)	NH3 (µg/m³)	O3 (µg/m³)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)	C6H6 (µg/m³)	BaP (ng/m³)
	PARAMETERS											
03.04.2022	48.40	22.00	6.79	19.70	0.47	12.00	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
06.04.2022	<7.10	20.40	7.01	24.40	0.76	24.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
10.04.2022	<5.70	24.60	6.32	20.40	0.61	22.80	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
13.04.2022	57.80	26.20	7.77	18.10	0.40	20.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
17.04.2022	52.30	24.10	6.48	22.40	0.59	18.00	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
20.04.2022	47.20	25.20	6.97	21.20	0.79	21.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
24.04.2022	50.10	26.00	6.37	20.00	0.70	20.20	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
27.04.2022	56.60	28.20	6.69	17.10	0.48	22.10	<20.0	<0.01	<5.0	<1.0	<4.2	<0.5
Monthly Average	52.00	25.56	6.78	20.40	0.61	20.35	<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 :2017)	IS 5182 : Part 6 :2006 (Reaff :2012)	IS 5182 : Part 10 :1999 (Reaff:2014)	IS 5182: Part 25:2019	IS 5182: Part 09:1974	EPA - IO3.4 June, 1999	EPA - IO3.1In 04,1999	EPA - IO3.1In 04,1999	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 Gov. Notification

Prepared By -

Checked By-

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MSK
TECHNO 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 : 01.05.2022
Sample No. : MSKGL/ED/2021-22/04/022200
Sample Description : Ambient Noise

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	Day Leq. Time dB(A)		Night Time Leq. dB(A)	
			Results	LIMIT	Results	LIMIT
1.	02.04.2022	Colony Area (R)	40.2	55	37.9	45
2.	04.04.2022	Kanak Prasad Village (R)	44.8	65	39.3	45
3.	05.04.2022	Near BMH (I)	70.4	75	54.1	70
4.	09.04.2022	Near Jetty (I)	74.1	75	65.8	70
5.	11.04.2022	Dosinga Village (R)	52.4	55	44.2	45
6.	12.04.2022	Near Bhitarkanika (Eco Sensitive Zone)	46.1	50	38.4	40

Noise Limit as per CPCB

Category of Area/Zone	Leq dB(A) Day Time	Leq dB(A) Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

NOTE :
Day Time : 06.00 Hr. 22.00 Hr.
Night Time:22.00 Hr.-06.00 Hr.

Report Prepared by:

For Mitra S. K. Private Limited

Authorised 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/906
Date : 04.05.2022
Sample No. : MSKGL/BD/2021-22/04/07565
Sample Description : Noise (Work Zone)

Noise Level Monitoring Data

Sl. No	Sampling Date	Sampling Location	MAX	MIN	Results in Avg. dB(A)
1.	03.04.2022	Stack Yard	84.3	41.2	71.6
2.	06.04.2022	Wagon Tippler	86.2	50.3	80.8
3.	07.04.2022	Near Site	71.5	39.8	67.5
4.	10.04.2022	Near Stacker & Reclaimer	75.0	40.2	65.7
5.	13.04.2022	Project Area	82.5	43.6	69.1
6.	14.04.2022	Transfer Point	87.4	48.7	77.2
7.	16.04.2022	Workshop	80.8	41.5	74.8
8.	17.04.2022	Steel Yard	82.5	51.3	79.7
9.	18.04.2022	FCC Shed	88.2	58.1	82.5
10.	19.04.2022	Near Port Canteen	77.4	46.1	69.3

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/2020-21/04606

Date : 04.05.2022

Client Name & Address	M/s The Dhamra Port Company Limited, Dostinga, Bhadrak, Odisha
Work Order No.	4002006186
Reference No.	MSKGL/FD/2021-22/00-60
Type of Sample	Piezometric Well
Sampling Done by	Mr. Kunja Bihari Nayak

GROUND WATER LEVEL MONITORING REPORT

Sl. No.	Location Name	Date of Monitoring	Water Level in feet
Piezometric Well			
1	Township Pump House	16.04.2022	11.54
2	Near WTP	16.04.2022	10.13

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. : 1888/910
Date : 01.05.2022
Sample No. : MSKUL/TD/30/1-25/04/0/152
Date of sampling : 16.04.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Township Pump House
Sampling Done By : Mr. Kanja Dhara Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limits	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 28° C)		6.5 - 8.5	No Relaxation	IS 3025 (Part 11) 1984 Reffm: 2017	7.77
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Reffm: 2014	57.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Reffm: 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:0.005)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Reffm: 2014	BDL(DL:0.001)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.0003)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 40)-1991 Reffm: 2014	BDL(DL:0.001)
11.	Phenols (as P)	mg/l	1.0	1.5	IS 3025 (Part 60) 2008 Reffm: 2015	BDL(DL:0.5)
12.	Cyanide	mg/l	0.05	1.5	3025 (Part 4)-1983: Reffm:2017	BDL(DL:0.2)
13.	Odour	Hazen	Agreeable	Agreeable	IS 3025 (Part 5)-1984 Reffm:2017	BDL(DL:1.0)
14.	Turbidity	NTU	5	5	IS 3025 (Part 10)-1984 Reffm: 2012	Agreeable
15.	Residual Free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Reffm:2014	BDL(DL:0.8)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Reffm: 2014	BDL(DL:0.1)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Reffm: 2014	BDL(DL:0.05)
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16) 1984; Reffm:2017	21.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Reffm: 2009	410.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 4) 2004 RA 2014	186.0
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46) 1994 Reffm: 2014	BDL(DL:0.01)
22.	Total Hardness (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 21)-2012	36.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	178.0
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.5)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Reffm: 2014	BDL(DL:0.02)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992, Reffm: 2014	BDL(DL:0.14)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.001)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
31.	Salinity	mg/l	-	---	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
					IS 3025 (Part 14) 2012	48.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BBS/910

Date- 04.05.2023

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991, Reaffirm: 2019	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988, Reaffirm: 2019	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986, Reaffirm: 2014	BDL(DL:0.1)
35.	Nitrite (as N)	mg/l	0.02	No Relaxation	IS 3025 (Part 33) 2004 RA 2014	BDL(DL:0.01)
36.	Cyanide (as CN)	mg/l	0.05	No Relaxation	IS 3025 (Part 27)- 1986 Reaffirm: 2014	BDL(DL:0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.5	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. : DDS/911
Date : 04.05.2022
Sample No. : MSKCL/FY2021-22/0002152
Date of sampling : 16.04.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Pump House WTP.
Sampling Done By : Mr. Ranja 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: 1518: : 2018	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 25° C)	---	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Reffm: 2012	7.68
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24) 1986 Reffm: 2014	nil 0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40) 1991 Reffm: 2014	2.12
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.001)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.001)
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 Reffm: 2014	BDL(DL:0.005)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 3) 2004 RA 2014	BDL(DL:0.001)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39) 1991 Reffm: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60) 2008 Reffm: 2014	BDL(DL:0.5)
12.	Colour	Hazen	5	15	IS 3025 (Part 4) 1983 Reffm: 2012	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5) 1983 Reffm: 2017	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10) 1984 Reffm: 2017	BDL(DL:1.0)
15.	Residual Free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26) 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53) 1988 Reffm: 2014	BDL(DL:0.05)
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32) 1988 Reffm: 2014	71.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16) 1984 Reffm:2012	378.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23) 1986 Reffm: 2002	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 Reffm: 2014	21.0
22.	Total Hardness (as $CaCO_3$)	mg/l	300	600	IS 3025 (Part 21) 2013	166.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.2)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2001 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Reffm: 2014	BDL(DL:0.4)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 3025 (Part 14) 1992: Reffm: 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^{+6})	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) 2001 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	---	---	IS 3025 (Part 14) 2013	46.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. BDS/911

Date- 04.05.2022

32.	Sulphide (as H2S)	mg/l	0.03	No Relaxation	IS 3025 (Part 29)- 1991, RAA 2014	BDL(DL-0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988, RAA 2014	BDL(DL-0.1)
34.	Chlorides	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986, RAA 2014	BDL(DL-0.1)
35.	Nickel (as Ni)	mg/l	0.02	No Relaxation	IS 3025 (Part 2)- 2009, RA 2014	BDL(DL-0.01)
36.	Cyanide (as CN)	mg/l	0.02	No Relaxation	IS 3025 (Part 27)- 1986, RAA 2014	BDL(DL-0.01)
37.	Anionic Detergents (as MBAS)	mg/l	0.2	1.0	IS 13158(Annex K)- 2006	BDL(DL-0.01)
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

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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/012
Date : 04.05.2022
Sample No. : MSKGL/FD/2021-22/04/0215
Date of sampling : 16.04.2022
Sampling Description : Ground Water (Piezometric)
Sampling Location : Running Room
Sampling Done By : Mr. Ranjan 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: 1518 : 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 27° C)		6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Reffm: 2012	7.65
2.	Sulphate (as SO_4)	mg/l	200	400	IS 3025 (Part 24)- 1986 Reffm: 2014	60.0
3.	Chloride (as Cl)	mg/l	250	2000	IS 3025 (Part 32)- 1988 Reffm: 2014	260.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 37) 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 18) 1984 Reffm: 2014	BDL(DL:0.0005)
9.	Cadmium (as Cd)	mg/l	0.003	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.0005)
10.	Mineral Oil	mg/l	0.5	No Relaxation	IS 3025 (Part 39) 1991 Reffm: 2014	BDL(DL:0.01)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60) 2008 Reffm: 2014	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4) 1983 Reffm:2012	BDL(DL:1.0)
13.	Odour		Agreeable	Agreeable	IS 3025 (Part 5) 1983 Reffm:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10) 1984 Reffm: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Reffm:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Reffm: 2014	BDL(DL:0.05)
17.	Cyanide (as CN)	mg/l	0.05	0.05	IS 3025 (Part 32)-1988 Reffm: 2014	50.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984 Reffm:2012	234.0
19.	Alkalinity (as $CaCO_3$)	mg/l	200	600	IS 3025 (Part 23)- 1986 Reffm: 2009	104.0
20.	Aluminum (as Al)	mg/l	0.03	0.2	IS 3025 (Part 7) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Reffm: 2014	22.0
22.	Total Hardness (as $CaCO_3$)	mg/l	300	600	IS 3025 (Part 21)-2013	150.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.0)
25.	Nitrate (as NO_3)	mg/l	45	No Relaxation	IS 3025 (Part 34) 1988 Reffm: 2014	BDL(DL:0.1)
26.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.001	0.002	IS 4073 (Part 4)- 1992 Reffm: 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 4073 (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.	Boron (as Bo)	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)- 2012	50.0

Continuation Sheet

MSK
TESTING & INSPECTION

Ref. No. BBS/912

Date- 01.06.2022

32.	Sulphide (as H2S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Reffm: 2014	BDL(DL:0.02)
33.	Ammonia (as total Ammonia N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Reffm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Reffm: 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 Reffm: 2014	BDL(DL:0.01)
37.	Anionic Detergent (as MBAS)	mg/l	0.2	1.0	IS 13428(Annex K)- 2005	BDL(DL:0.01)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23rd Edn.) 6410B	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. R. Private Limited.

Authorized Signatory

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MSK
TESTING & INSPECTION

TEST REPORT

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

Report No. : BRS/991
Date : 04.03.2022
Sample No. : MSKOL/EB/2021-22/04/00728
Sample Description : EFFLUENT WATER
Sampling Location : STP 13 KLD
Date of sampling : 02.04.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	--	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	--	6.5 – 9.0	APHA (23rd Edition) 4500 H+B	6.92	7.13
4.	Appearance	--	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	416.0	8.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	98.0	4.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	388.0	10.7
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	18.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500 NH3-F 2017	28.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rtfm:2014	22.0	1.4
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	3400.0	86.0

S. Kanya
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. : BRS/903
Date : 04.05.2022
Sample No. : MSKCL/ED/2021-22/04/03155
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 16.04.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----		APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H+B	6.91	7.22
4.	Appearance		--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	287.0	8.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	84.0	4.5
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	270.0	11.8
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	21.0	<1.5
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3 F 2017	36.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reffm 2014	44.0	2.4
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	3100.0	102.0

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 : DOSINGIA, PO : DHAMRA
DIST : BHADRAK, PIN :756171 ODISHA

Report No. : BBS/913
Date : 01.07.2022
Sample No. : MSKGL/ED/2021-22/04/00/60
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 02.06.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Unity	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	–	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	–	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.88	7.29
4.	Appearance	----	–	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	422.0	8.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	96.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	250.0	6.8
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	21.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	21.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	28.0	1.2
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2850.0	78.0

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
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/914
Date : 04.05.2022
Sample No. : MSKGI /ED/2021-22/04/02158
Sample Description : EFFLUENT WATER
Sampling Location : STP 278LLD
Date of sampling : 16.04.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23rd Edition) 4500 H-B	6.62	7.13
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<100.0	APHA (23rd Edition) 2540D	150.0	4.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	45.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	121.0	6.2
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	31.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999), Reffm.2014	44.0	1.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	3000.0	96.0

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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. : BHS/903
Date : 04.05.2022
Sample No. : MSKOL/ED/2021-22/04/00762
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 07.04.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.2 – 9.0	APHA (23rd Edition) 4500 H B	6.96	7.34
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	426.0	14.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	66.0	4.6
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	198.0	12.2
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5220B 2017	23.3	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500 NH3-F 2017	31.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reffm:2014	34.0	2.5
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	31000.0	38.0

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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. : R86/004
Date : 04.05.2022
Sample No. : MSKGL/BD/2021-22/04/02136
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 16.04.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	–	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	–	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.72	7.39
4.	Appearance	----	–	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	176.0	4.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	60.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	137.0	5.8
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	10.0	<1.4
9.	Ammoniacal Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	28.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	42.0	2.6
11.	Fecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	2600.0	44.0

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. : BRS/907
Date : 04.05.2022
Sample No. : MSKGL/ED/2021-22/04/00764
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 02.04.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 30°C	----	6.5 - 9.0	APHA (23rd Edition) 4500 H-B	6.78	7.49
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	167.0	1.0
6.	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	88.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220B 2017	316.0	8.4
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	10.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500-NH3-F 2017	40.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm 2014	56.0	1.7
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23rd Edition) 9221 E	4200.0	49.0

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MSK
TESTING • INSPECTION

TEST REPORT

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

Report No. : BHS/908
Date : 04.05.2022
Sample No. : MSKGL/ED/2021 22/04/02157
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 16.04.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Unity	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23rd Edition) 2130B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	--	6.5 – 9.0	APHA (23rd Edition) 4500 H-B	6.98	7.66
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23rd Edition) 2540D	340.0	6.0
6	BOD	mg/l	<10.0	APHA (23rd Edition) 5210B 2017	80.0	<2.0
7.	COD	mg/l	<50.0	APHA (23rd Edition) 5220D 2017	290.0	6.0
8.	Oil & Grease	mg/l	<10.0	APHA (23rd Edition) 5520B 2017	4.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23rd Edition) 4500 NH3-F 2017	30.0	<0.1
10	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Reffm 2014	39.0	2.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (22nd Edition) 9221 E	1800.0	62.0

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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. : BDS/915
Date : 04.05.2022
Sample No. : MSK/CH/FD/2021-22/04/01847
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 03.04.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26) 1987;R(Re:2011)	7.41
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;R(Re:2006)	7891.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; R(Re:2012)	6.91
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	256.0
5.	Moisture content	%	Lab Method	24.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2996.0
7.	Sulphate (as SO_4)	mg/kg	IS 2720 (Part 27) 1977;RA 2015	241.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/13	<5.0
9.	Phosphate (as PO_4)	mg/kg	TPM/MSK/P&E/1/12	78.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	429.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/12	454.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2887.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	745.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	20.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	19.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	22.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	349.0

Continuation Sheet

MSK TESTING&INSPECTION

Ref. No. BBS/015

Date- 04.05.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	8.1
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	2941.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	35.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999), Reffm 2014	510.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/1/98	436.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B Dec. 1996, 8270 D - Feb.2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	30.0
27.	Silt	%	TPM/MSK/P&E/1/36A	29.0
28.	Texture	Mean	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	41.0

Bioloeical Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/gr dry wt.	1445
2.	Total count (Phytobenthos)	70 mg wet sediment	276
3.	No of species (Phytobenthos)	Nos	4
4.	Diversity index (Phytobenthos)	—	1.84
5.	Major Species (phytobenthos)	—	*Rhizosolenia mobilimensis, Cerataulina sp*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Phychaeta-62,Bivalvia-18
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m^2	160

Report Prepared by:

For Mitra S.K. Private Limited

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MSK
TESTING & INSPECTION

TEST REPORT

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

Report No. : DHS/916
Date : 04.05.2022
Sample No. : MSK/GL/EO/2021-22/04/01844
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 03.04.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Results
1.	pH value	None	IS 2720 (Part 26) 1987;RAffm 2011	7.56
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;RAffm2006	8050.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; RAffm 2015	0.94
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	290.0
5.	Moisture content	%	Lab Method	42.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	4473.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	798.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/45	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	196.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	94.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	5893.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	634.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	19.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	24.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	37.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	496.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. 2865/16

Date- 04.05.2017

18.	Lead (as Pb)	mg/kg	EPA 6010D	8.1
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	6554.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	36.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reff:2011	202.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/1/68	510.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec. 1996, 8270 D - Feb 2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C, USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/38A	41.0
27.	Silt	%	TPM/MSK/P&E/1/36A	30.0
28.	Texture	Name	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	26.0

Biological Result

Sl. No.	Parameters	Unit	Results
1.	Fun/209 (Phytobenthos)	CFU/g dry wt.	1622
2.	Total count (Phytobenthos)	20 mg wet sediment	274
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	—	1.88
5.	Major Species (phytobenthos)	—	*Bidulphia multiduata, Navicula clostertum*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)		Polychaeta-44,Bivalvia-15
8.	Total no. of species encountered (Fauna)	Nos.	10
9.	Total fauna (Fauna)	per m^2	201

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For Mitra SK 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. : BH5/917
Date : 04.05.2022
Sample No. : MSK/GL/FD/2021-22/04/01142
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 26.04.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Results
1.	pH value	None	IS 2720 (Part 26) 1987:RA2011	7.88
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984:RAffm:2006	8165.0
3.	Organic Matter	%	IS 2720 (Part 22) 1972: RAffm:2015	1.1
4.	Turbidity	N.T.U	APHA (21st Edition) 2130B	300.0
5.	Moisture content	%	Lab Method	45.0
6.	Chloride (as Cl⁻)	mg/kg	TPM/MSK/P&E/1/10	4880.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977:RA 2013	736.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	10.2
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	127.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	54.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1020.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	710.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	14.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	18.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	32.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	424.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. R85/017

Date- 04.05.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	11.2
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	8117.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	33.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Reffm:2014	589.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/5/68	515.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8015 D Feb 2007	<1.0
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/16A	45.0
27.	Silt	%	TPM/MSK/P&E/1/16A	35.0
28.	Texture	None	TPM/MSK/P&E/1/16A	Loam
29.	Clay	%	TPM/MSK/P&E/1/16A	20.0

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobanthos)	CFU/g dry wt.	1700
2.	Total count (Phytobenthos)	50 mg wet sediment	256
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity Index (Phytobenthos)	--	1.51
5.	Major Species (phytobenthos)	---	*Cocconeis* sp, *Hebidulphia mobiliensis*
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)		Polychaete-34,Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m²	280

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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/918
Date : 04.05.2022
Sample No. : MSKGL/ED/2021-22/04/61148
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of Sampling : 26.04.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Results
1.	pH value	None	IS 3025 (Part 11)-1987;RA2011	8.10
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;RAW:2006	4990.0
3.	Organic Matter	%	IS 2720 (Part 22) 1972; RAW:2015	1.9
4.	Turbidity	N.T.U	APHA (23rd Edition) 2130B	250.0
5.	Moisture content	%	Lab Method	40.0
6.	Chloride (as Cl⁻)	mg/kg	TPM/MSK/P&E/1/10	2998.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	690.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/42	<5.0
9.	Phosphate (as PO4)	mg/kg	TPM/MSK/P&E/1/12	<2.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/13	196.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/14	325.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1781.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	250.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	22.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	12.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	70.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	184.0

Continuation Sheet

MSK TESTING & INSPECTION

Ref. No. 6105/918

Date- 01.05.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	9.7
19.	Boron (as B)	mg/kg	IS 13428 :2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1999.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	16.1
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999), Reim:2014	262.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/1/68	320.0
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec. 1996, 8270 D - Feb.2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/66A	39.0
27.	Silt	%	TPM/MSK/P&E/1/66A	32.0
28	Texture	None	TPM/MSK/P&E/1/66A	Loam
29.	Clay	%	TPM/MSK/P&E/1/66A	29.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1289
2.	Total count (Phytobenthos)	50 mg wet sediment	202
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	—	1.80
5.	Major Species (phytobenthos)	—	*Microcystis aeruginosa, Cladophoraceae sp*
6.	Name of Phylum (Fauna)	—	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	—	Phylum-7, Bivalvia-19
8.	Total no. of species encountered (Fauna)	Nos.	18
9.	Total fauna (Fauna)	per m²	191

Report Prepared by:

For Mitra S.K. Private Limited

Authorised Signatory

Continuation Sheet

MSK TESTING & INSPECTION

Ref: MSKGL/EO/BHU-2021/01380

Date: 04.05.2022

Site Specific Monitored Meteorological Data

For : The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha

Sr. No.	Parameters		April.22
1.	Temperature (°C)	Minimum	25.5
		Maximum	40.9
		Average	30.5
2.	Relative Humidity (%)	Minimum	26.0
		Maximum	85.9
		Average	66.0
3.	Wind Speed (m/s)	Minimum	0.83
		Maximum	15.8
		Average	4.25
4.	Wind Direction (%)	N	6.7
		NNE	6.8
		NE	18.4
		ENE	6.1
		E	1.88
		ESE	3.5
		SE	6.8
		SSE	3.22
		S	17.4
		SSW	0.4
		SW	4.7
		WSW	3.6
		W	4.1
		WNW	7.4
		CALM	0.00
5.	Rainfall (mm)	Total	0.0
		Minimum Day Wise	0.0
		Maximum Day Wise	0.0
		Average	0.0
6.	Ambient Pressure (mm Hg)	Minimum	747.8
		Maximum	748.7
		Average	751.5

(Source - Site Specific Data)

Prepared By

Verified By

ANNEXURE-II

THE DHAMRA PORT COMPANY LIMITED

Environment Management Plan

Sl. N0.	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.	- As a part of existing operation, Periodic marine water quality monitoring including turbidity is carried out near Kanika Island by engaging MOEF&CC approved laboratory. - Dredging is being carried out in the areas identified and approved as a part of Revised Master plan.
		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.	- 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 minimize 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.	- No waste is being discharged into sea. - Oil Spill control measures are in place. - Wastes collected from ship are being disposed in line to the 5R's principle. - Spill of bentonite clay during construction to marine environment is avoided. - Containment is provided around the reclamation area. - The unused dredged material is being disposed of in the identified areas approved as a part of Revised Master plan. - The marine environmental monitoring is being carried out by engaging MOEF&CC approved laboratory. The details of

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
					Marine Water quality monitoring reports for the period of Apr'22 to Sep'22 is enclosed as **Annexure I.**
		Mangrove area	- Impact on 9ha mangrove near the southern boundary. - Impact on mangroves near northern boundary. - Impact on mangroves at Kanika Island.	- 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 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.	- Noted & the same is being complied. - Utmost care is being taken by DPCL for the protection and conservation of Mangrove area. - Complied. - Noted and is being complied. - Noted and is being complied. - Noted and is being complied.

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				- Awareness will be imparted to workers in the port about the importance of mangroves and their conservation.	- Noted and is being complied.
		Impact on turtle/Other Macro Fauna	- Accidental take during dredging. - Light Glare on Nesting	- The channel area is well away from the turtle congregation area and hence 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 specialized 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	- Noted and the same is being complied.
		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 and the same is being complied.
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.	Complied. As a part of existing operation, air pollution mitigation measures are being adopted.

Sl. N0.	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.	- All the vehicles and construction machinery will be periodically checked 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). - Well-maintained construction equipment, which meets the regulatory	Noted and the same is being complied. As a part of existing operation Noise monitoring is carried out on monthly basis by engaging accredited NABL & MOEF&CC laboratory. The Monitoring results are also submitted to the Regional office on regular basis. The copy is enclosed as **Annexure - I.**

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				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 practiced 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 minimize 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 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	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. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				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. - 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.	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.

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
					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.
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	- 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.

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
			through existing sources .i.e. Matai River.		
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. - 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.	Noted and the same is being complied. 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 of Apr'22 to Sep'22, a total quantity of 188.806 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 and the same is being complied.

Sl. N0.	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 and the same is being complied.
Operational Phase					
1	Cargo handling and Inland Cargo movement and storage	Air Quality	- Emissions from loading/ unloading equipment, DG sets, vehicular dust emissions, fugitive emissions from storage areas, Emissions from vessels visiting Dhamra	- Most of the cargo transportation through rail and Pipelines (~ 70%). - Use of specialized ship loaders/unloaders, - wagon tippler, track Hopper, covered conveyors and rapid loading system through silos.	- Noted and being complied. - Handling of cargo is being done by ship loader/unloaders. - Cargo loading is being done through silos.

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
	areas, Regasification process and equipment operation such as pumps, compressors, etc.,		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.	- 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.	- Low sulphur diesel fuel is being used. - Dust suppression systems have been installed at all the possible locations. - Safe stacking of cargo piles is being maintained. - Noted. - Complied, periodic cleaning of cargo spillage is being carried out. - Complied. - Green belt development is being done. - Complied. - Vehicle speed limit is regulated inside Port. - Complied. - Noted.
		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 and the same is being complied.
		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.	Noted. Presently all cargo movement is through rail. DPCL has an exclusive rail connectivity for the project and has proposal for future expansion of rail-road connectivity.

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				- 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.	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 – Both Normal traffic + Generated traffic (due to proposed expansion) considered for the study. 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.
		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	- 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	Noted and the same is being complied.

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
			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.	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. - 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	- No waste is being discharged into sea. DPCL has Port Reception Facilities to collect waste from the ships and the collected wastes are being disposed in line to 5R's principle. - MARPOL regulations are being followed. - DPCL has Oil spill contingency plan is in place and regular mock drills are being conducted. - Port reception facility is available for bilge water and waste oil. - Noted. - 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
				mathematical model studies which will ensures attainment of ambient conditions (within 600 m) in the harbour area. - Marine Water Quality monitoring is proposed as Part of Environmental Monitoring programme.	- The marine environmental monitoring is being carried out by engaging MOEF&CC approved laboratory. The details of Marine Water quality monitoring reports for the period of Apr'22 to Sep'22 is enclosed as **Annexure I.**
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.	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. Seven persons have been undergone IMO Tire 1 training and three persons have undergone IMO Tire 2 training and one person has undergone IMO Tier 3 training at Port. Oil Spill drills are conducted on a regular basis and the last drill was conducted on 14.07.2022.
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 soil 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	- Noted and is being complied.

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				receptors if any impacted would be provided with suitable mitigations 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 Mantai 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.	Noted.
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. - Neutralization 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 - Treated Sewage and effluents shall be reused for dust suppression, irrigating greenbelt and other requirements.	Noted. - 3 nos. of settling pits have been constructed to treat the runoff water and the treated water is being used for dust suppression. - 4 nos. of STPs have been constructed to treat the sewage water and the treated water is being used for gardening.
7	Seawater withdrawal for Regasification	Marine ecology/ River Ecology	- Impingement/Entrainment/ Entrapment of aquatic life	- Intake with proper screens will be Provided	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
	and water withdrawal from River matai for desalination plant			- Maintaining Low Intake Velocity to minimize 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.	
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 authorized vendors. - Commercial use will be explored for the materials settled in dump pond.	Complied. 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 reported period, a total quantity of 188.806 MT of solid waste has been handled in line to 5R concept. Compost is being generated from bio-degradable waste using Organic Waste Converter and the same is used as manure in greenbelt/gardens. We have color coded bins for segregating different category of solid waste. Recyclable wastes are handed over to authorized recyclers.
	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	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

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				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) which covers onsite and offsite emergency plans. - Recovery of spills to the maximum extent possible.	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. Dhamra Port Company Limited is an ISO 45001-2018 certified company. - Hazardous wastes are being disposed through approved OSPCB vendors.
	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.	- 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.

Sl. N0.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
			- 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.		
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 and transport facilities that will be developed/ triggered as a part of overall economic development of the region.		Noted.
		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-III

Dhamra Port Company Limited

Environmental Expenditure

Period: Apr-21 to Sep-22

Sl.No	Activity/Category	Expenditure (in Lakhs)
01	Construction of new drains and drain cleaning	7.36
02	Environmental Monitoring Services	15.61
03	Hazardous waste management & disposal	11.70
04	Treatment and Disposal of Bio-Medical Waste	1.92
05	Plastic Waste Management & Disposal	9.24
06	Inside Port plantation and maintenance	6.65
07	O&M of Sewage Treatment Plant (STP)	3.77
08	Port housekeeping (Environment)	15.79
09	Port housekeeping (Operation)	430.00
10	Housekeeping (Railway)	6.74
11	Housekeeping (Engineering Services)	125.77
12	Mechanized Sweeping Machine	50.80
13	O & M of OWC machine	6.69
14	Firefighting Expenses	44.68
15	O & M of Mist Cannon	8.23
16	Sewage Management	15.88
	Total	**760.83**

ANNEXURE-IV

THE DHAMRA PORT COMPANY LIMITED

CSR WORK DETAILS
Apr'22 to Sep'22

	EDUCATION	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Total (Apr'22 - Sep'22)
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,	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
2	LEAP project - ThinkZone	0.00	0.00	0.00	12.45	2.50	2.50	**17.45**
3	**Support to Quality Education** (Setting up School Library in High Schools and ME schools) **Programme :**	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
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	0.25	**0.25**
5	**Support to School** (in bridging the gap of basic facilities in schools) **Programme :**	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
6	Learning Enrichment program forTeachers	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
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,	24.30	14.40	14.40	39.63	46.96	35.07	**174.76**
10	**Udaan** - Young & adolescent Students get to visit the Adani Dhamra Port for a knowledge based experience about the Port and the actvities of Adani Foundation	0.00	0.00	0.00	0.00	0.00	1.86	**1.86**
		24.30	*14.40*	*14.40*	*52.08*	*49.46*	*39.68*	***194.32***
	COMMUNITY HEALTH							
1	**Wellness Centre-** Medicines for free distribution to community at the health centre.	0.00	0.00	0.00	0.00	8.50	8.50	**17.00**
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	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
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	0.00	**0.00**
4	Blood Donation Camp	0.00	0.00	0.00	1.56	0.00	0.00	**1.56**
5	Special Day and Month Observation	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
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**
		0.00	*0.00*	*0.00*	*1.56*	*8.50*	*8.50*	***18.56***
	SUSTAINABLE LIVELIHOOD							
1	Support to Women SHG	0.00	0.00	1.20	0.00	0.00	0.00	**1.20**
2	Farmers' group initiative	0.00	0.00	0.00	14.00	0.00	0.00	**14.00**
3	Livestock Care	0.00	0.00	0.00	0.00	7.20	7.20	**14.40**
4	Disaster Mitigation- Calamity Redressal	0.00	0.00	0.00	0.00	0.25	0.25	**0.50**
5	Promoting Rural Sports	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
6	Aahar	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
7	Skill Development	2.11	2.11	2.11	2.11	2.31	2.11	**12.86**
8	Stakeholder Management	0.00	0.00	0.00	0.00	0.25	0.00	**0.25**
		2.11	*2.11*	*3.31*	*16.11*	*10.01*	*9.56*	***43.21***
	RURAL INFRASTRUCTURE DEVELOPMENT							
1	**Village Development Related**: Road Infra Support	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
2	**Drinking Water Facility**-Handpump (31)	0.00	0.00	0.00	2.05	0.00	0.00	**2.05**
3	**Village Development Related**: Swach Dhamra Mission-Two Community Toilet	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
4	**Education related**:Adani Skill Development	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
5	**Stadium Work Support**: Mini Stadium at Chandbali	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
6	Mobility cost for Supervision and monitoring for 5 months	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
7	Pond Excavation	0.00	0.00	0.00	12.01	0.00	0.00	**12.01**
8	**Village Development Related**: High Mast Light Support	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
9	**Library Support** (Library Infrastructure Supportat Basudevpur)	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
10	Engagement with Different Stakeholders. (SLD) - Rennovation of Community POND.	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
11	Crematorium	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
		0.00	0.00	0.00	14.06	0.00	0.00	14.06
	GRAND TOTAL	***26.41***	***16.51***	***17.71***	***83.81***	***67.97***	***57.74***	***270.15***

ANNEXURE-V

Five Years Budget for Corporate Environment Responsibility (CER)

SL. No.	CORE AREA	PROJECT	Budget for 2019 - 2024 (5 years)					
			2019-20 (In Lakhs)	2020-21 (In Lakhs)	2021-22 (In Lakhs)	2022-23 (In Lakhs)	2023-24 (In Lakhs)	Grant Total (In Lakhs)
1	Biodiversity	Mangroves conservation plan	0.00	0.00	0.00			**0.00**
		Turtle / other spices Conservation plan	7.56	24.59	61.85			**94.00**
		Environment Cell cum School Library	0.00	0.00	0.00			**0.00**
		Community Plantation	81.40	0.00	77.31			**158.71**
		Total of Biodiversity	88.96	24.59	139.16	0.00	0.00	252.71
2	Water Conservation and Water Recharge Projects	Pond Deepening / Pond strengthening	0.00	0.00	0.00			**0.00**
		Bore well Recharge Structure	0.00	0.00	0.00			**0.00**
		Total of Water Conservation and Water Recharge Projects	0.00	0.00	0.00	0.00	0.00	0.00
3	Fisherman alternate livelihood	Technical Training to Fisherman youth	0.00	0.00	0.00			**0.00**
		Soft Skill Training to Fisherwomen	0.00	0.00	0.00			**0.00**
		Life Jacket and Solar Lantern Support	0.00	0.00	0.00			**0.00**
		Electrification of Fishing Area	0.00	0.00	0.00			**0.00**
		Raising of Plat form	0.00	0.00	0.00			**0.00**
		Total of Fisherman alternate livelihood	0.00	0.00	0.00	0.00	0.00	0.00
4	Women Empowerment Project to promote	Income generation programme to Women development.	0.00	0.00	0.00			**0.00**
		Training to SHGs for their capacity building.	0.00	0.00	0.00			**0.00**
		Total of Women Empowerment Project to promote entrepreneurship	0.00	0.00	0.00	0.00	0.00	**0.00**
5	Agriculture Promotion	Commercial Vegetable Cultivation	0.00	0.00	0.00			**0.00**
		Fodder Cultivation/Farmer initiatives	0.00	0.00	0.00			**0.00**
		Multi Cropping	0.00	0.00	0.00			**0.00**
		Total of Agriculture Promotion	0.00	0.00	0.00	0.00	0.00	0.00
6	Community Infrastructure	Internal village Road Development	0.00	0.00	0.00			**0.00**
		Excavation of Hand Pumps for Drinking water facility	0.00	0.00	0.00			**0.00**
		Construction of Community toilet	0.00	0.00	0.00			**0.00**
		Development of School Infrastructure	0.00	0.00	0.00			**0.00**
		Construction of Mini Stadium	0.00	0.00	0.00			**0.00**
		Fixing of High Mast Light	0.00	0.00	0.00			**0.00**
		Construction of community library	0.00	0.00	0.00			**0.00**
		Total of Community Infrastructure	0.00	0.00	0.00	0.00	0.00	0.00
		GRAND TOTAL	**88.96**	**24.59**	**139.16**	**0.00**	**0.00**	**252.71**

		Capex Budget amount (Cr)	**535.97**	**185.99**	**290.83**			
		CER Cost @ 0.125 % (Cr)	**0.67**	**0.23**	**0.36**			
		CER Cost @ 0.125 % (Lakhs)	**67.00**	**23.25**	**36.35**			
		Status	**Complied**	**Complied**	**Complied**			

ANNEXURE-VI

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)		6875		
	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 equiped with equipment
MANPOWER	IMO Level 1		7		
	IMO Level 2		3		
	IMO Level 3		1		
	Other		15		

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-VIII

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	SR-7	CO2 -4.5KG-2nos DCP-5KG-1no
62	SR-8	CO2 -4.5KG-2nos DCP-5KG-1no
63	SR-4A	CO2 -4.5KG-2nos DCP-5KG-1no
64	SR-3A	CO2 -4.5KG-2nos DCP-5KG-1no
65	Fire & Security Barrack	CO2-4.5KG-3nos, DCP-5KG-2no
66	JETTY CONTAINER	CO2-4.5KG-1no, DCP-5KG-1no
67	MHS OFFICE	CO2-4.5KG-2 Nos.
68	PSS	CO2 -4.5KG-3nos, DCP-5kg-01No.
69	BMH WORKSHOP	CO2 -4.5KG-3nos DCP-5KG-3nos FOAM-50ltrs-01no
70	All Equipment	DCP-5KG-08nos.
71	LOCO SHED	CO2 -4.5KG-02nos, DCP-5KG-2Nos.
72	DIESEL FILLING STATION	Foam-9ltr-1no
74	IOCL	Foam-9ltr-1no , Foam 5oltr-01 No.
75	WTP	CO2 -4.5KG-4nos
76	ADANI HEALTH CENTER	CO2-4.5kg-05 Nos, DCP5kg-03 Nos.
77	REWA OFFICE	CO2-4.5KG-3Nos DCP-5KG-1No
78	CUSTOMS OFFICE	CO2-4.5KG-1No DCP-5KG-1No
79	DPCL STORE	CO2 -4.5KG-1no DCP-5KG-1No
80	Lubricant Store	Foam-9ltr-1no, DCP-5KG-1No.
81	SS-01	CO2 -4.5KG-1no
82	SS-02	CO2 -4.5KG-1no
83	SS-03	CO2 -4.5KG-1no
84	SS-04	CO2 -4.5KG-1no
85	SS-05	CO2 -4.5KG-3nos
86	Adani port canteen	CO2 -4.5KG-03no DCP-5KG-1no
87	DHAMRA HOUSE	DCP-6KG-7nos, DCP-2KG-1nos CO2 4.5KG-01no
89	KANIKA GUEST HOUSE	CO2 -4.5KG-01no DCP-5KG-1no
90	DAV SCHOOL, KUAMARA	CO2 -4.5KG-16nos DCP-5KG-15nos
91	TOWNSHIP	CO2 -4.5KG-11nos
92	New Township	CO2 -4.5KG-04nos, DCP-6KG-4nos
93	COMMUNITY HALL	CO2 -4.5KG-1nos DCP-5KG-2nos
94	PREFAB	CO2 -4.5KG-4nos DCP-5KG-5nos
95	DHAMRA GUEST HOUSE	CO2 -4.5KG-4Nos.
96	RAILWAY OFFICE	CO2 -4.5KG-02noS DCP-5KG-3nos
97	BHATATIRA STATION	CO2(4.5kg)-2Nos DCP-5KG-1no
98	BHATATIRA LC-5	DCP-5KG-1no
99	BHATATIRA- SP	CO24.5kg-1No
100	GURUDASPUR STATION	CO2-4.5KG-1No DCP-5KG-1No
101	GURUDAS PUR TSS	CO2 -4.5KG-1no DCP-5KG-4Nos.
102	GURUDAS PUR SUB STATION	DCP-5KG-2Nos
103	INTAKE	CO2 -4.5KG-3nos DCP-5KG-1no
104	RANITAL	CO2 -4.5KG-1no
105	GURUDAS PUR LC-19	DCP-5KG-1no
106	IMWB	CO2-4.5KG-1 No.
107	LOCO TRANSFORMER	CO2-4.5KG-2nos, DCP-5KG-1no

108	HEALTH CENTRE	CO2-4.5KG-1no, DCP-5KG-1 No.
109	TOWER WAGON	DCP-5KG-3nos
110	TIHIDI STATION	CO2 -4.5KG-1no DCP-5KG-1no
111	BANSADA STATION	CO2 -4.5KG-3nos
112	LC-26, NEAR DI ROAD	CO2 -4.5KG-1no
117	KOCHILA OFFICE	C02-4.5KG-2Nos DCP-5KG-2nos
118	BRAMHANI OFFICE	CO2 -4.5KG-1no DCP-5KG-1no
119	KANIKA TRANSFORMER	CO2 -4.5KG-1no, DCP5KG-1NO.
120	S. CONTAINER, NEAR MAIN GATE	CO2 -4.5KG-1no DCP-5KG-1no
121	FIRST AID CENTER	CO2 -4.5KG-1no DCP-5KG-1no
122	DPCL AMBULANCE(OLD)	DCP-5KG-1no.
123	DPCL AMBULANCE(NEW)	DCP-5KG-1no.
124	RAILWAY GSS	CO2 -4.5KG-1no DCP-5KG-1no
125	RUNNING ROOM	CO2 -4.5KG-1no DCP-5KG-1no
126	SAFETY INDUCTION HALL	CO2 -4.5KG-1no
127	FCC GODOWN	CO2 -4.5KG-19nos,DCP-5KG-03nos,Foam-9ltr-3nos,Foam 50 ltr.-1
128	FCC OFFICE	CO2 -4.5KG-1no DCP-5KG-1no
129	FCC CANTEEN	DCP-5KG-1no
130	WAISTAGE OIL STORE	Foam-9ltr-1no,CO2 4.5KG-01NO
131	LABOUR REST HOUSE	CO2 -4.5KG-1no
132	SS-6	CO2 -4.5KG-16nos DCP-5KG-10nos, Foam-50ltr-1no
133	COLONY PUMP HOUSE	CO2 -4.5KG-1no
134	BHADRAK GUEST HOUSE	CO2 -4.5KG-1no DCP-5KG-1no
135	BBSR OFFICE	CO2 -4.5KG-3nos DCP-5KG-4nos
136	BBSR GUEST HOUSE	CO2 -4.5KG-1no DCP-5KG-1no.
137	ADANI RAILWAY ENGINE	CO2 4.5KG-1, DCP-5KG-01 NO.
138	WASTE SHED	DCP5KG-1 NO, FOAM9LTR-1 NO.
139	FCC TRANSFERMER	DCP5KG-01 NO,CO2 4.5KG-01 NO
140	FCC LABOUR COLONY	CO2-4.5KG-01 NO, DCP5KG-02NOS.
141	SS-7	CO2 -4.5KG-9nos
142	SS-8	CO2 -4.5KG-9nos, DCP-5KG-02Nos
143	SS-9	CO2 -4.5KG-16nos, DCP-5KG-06Nos
144	TP-7(A)	CO2 -4.5KG-1no
145	TP-8(A)	CO2 -4.5KG-1no
146	TP-1(C)	CO2 -4.5KG-1no
147	TP-2(C)	CO2 -4.5KG-1no
148	TP-3(C)	CO2 -4.5KG-1no
149	North Gate	CO2 -4.5KG-3nos, DCP-5KG-01No
150	Mobile Equipment Office, BMH	CO2 -4.5KG-1no
151	DPCL Central Store	Foam 50ltr-01 No, DCP5kg-01 No.
152	Fire pump house (T. HOPPER)	CO24.5kg-01 No, DCP5kg-01 No.
153	FCC Workshop	CO24.5kg-02 Nos, DCP5kg-02 Nos.
154	Township Shopping Mall	DCP5kg-03 Nos, CO2-4.5kg-01 no.
155	CAT Dozer	DCP6KG-01 Nos
Total Fire Extinguisher Installed at site		**CO2-4.5kg=316Nos** **CO2-3kg =05nos** **DCP-6/5kg=187nos** **DCP-2kg=04nos** **DCP 25kg-02nos** **Foam-9ltrs=17nos** **Foam -50ltrs =06nos**

Stock Balance Fire Tender and Fire Store	**CO2 (4.5kg) =97nos** **CO2 (3kg) =5nos** **DCP (ABC)-6kg=161nos** **DCP (ABC)-2kg=6nos** **DCP-25kg=08nos** **Foam(45ltrs) =05nos** **Foam (50ltrs) =02nos** **Water Mist(50ltrs) = 01 no.** **Water Mist(09ltrs) = 01 no.**
Total Numbers fire Extinguisher	**DCP Extinguisher= 368 Nos** **CO2 Extinguisher= 423 Nos** **Foam Extinguisher= 30 Nos** **Water Mist= 02 Nos**

SL.No.	Description of mock drills and training	Numbers of training & mock drill conducted	Numbers of participants
1	Emergency Rescue mock drill	06	149
2	Safety Induction Training	158	2698
3	Portable fire Extinguisher training	28	662
4	Defensive driving training	2	34
5	Toolbox training	546	4989
6	On the Job Safety Awareness	26	260

Fire Crews member:-

Sl No	Position	Total
01	Fire Officer	01
02	Fire Supervisor	02
03	Safety Co ordinator	01
04	Fire tender Operator	07
05	Leading fireman	07
06	Fire man	21
		Total Fire Crews- 39

Fire Tender Details:-

Sl No	Fire Tenders	Water tank Capacity	Foam tank Capacity
01	OR-22D-8144	4500 ltr	500 ltr
02	OR-22D-8145	4500 ltr	500 ltr
03	OD-22T-3231	5000 ltr	1000 ltr

FIRE EXTINGUISHER TRAINING

EMERGENCY RESCUE MOCK DRILL AT SITE

Worker Colony

Worker Colony

Kitchen

Open Washing Space

Bathroom & Toilet complex

adani

Ports and Logistics

DPC/EM/04/08/2022-023 **Date: 31.05.2022**

To
The Member Secretary
State Pollution Control Board, Odisha
A/118, Niladri Nagar, Ext. - II,
Bhubaneswar - 751012
Odisha

Sub: Environmental Statement for the financial year ending 31st March 2022 for Dhamra Port Company Limited at Dhamra, Bhadrak, Odisha.

Ref: Consent Order No. 4215/IND-I COR 5348 dated 24.03.2021

Dear Sir,

With reference to the above-mentioned subject, please find enclosed Environmental Statement in Form V prepared under Rule 14 of the Environmental (Protection) Rules 1986 of The Dhamra Port Company Limited located at Dhamra, Bhadrak, Odisha for the financial year ending 31st March 2022.

Thanking you.

Yours faithfully,
For The Dhamra Port Company Limited

Sugyan Rayak
HOS Environment

Encl: As above.

Copy to: The Regional Officer, State Pollution Control Board, Odisha, Plot no. 1202, Gangadevipur, Jaraipur, Cuttack - 754019

The Dhamra Port Company Ltd
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Registered Office: [illegible]

FORM V
(See Rule 14)

Environmental Statement for the Financial Year ending 31st March 2022

PART – A

II	Name and address of the Owner/ Occupier of the Industry Operation or Process	: Sudip Bagchi Chief Operating Officer The Dhariwal Pet Company Limited AEPZ - Dhanga, Vill. Dhanora, Dist-Bhadrak Odisha - 756171
III	Industry Category Primary (STC Code) Secondary (STC Code)	: Red-B NA NA
III	Production Capacity	: 21,54,000 Bags (Raman Cargo & 1,00,000 TPA Arman Consolidated Cargo
IV	Year of Establishment	: 2008
V	Date of last Environment Statement submitted	: 14th September, 2021

PART – B

Water and Raw Material Consumption

(i) Water Consumption

Water Consumption Cu.Mtr./Day	
Process	Nil
Cooling	Nil
Domestic	259.364 m³/day
Dust suppression & Fire fighting	35,242.428 m³/day

Name of Products	Process Water Consumption per unit of Product Output	
	During the current financial year (2020-21)	During the current financial year (2021-22)
Handling of Iron Ore, Coal, Limestone, Gypsum, Steel rod/plate, Slag, Ferrolloys, Sand, LPG, Petroleum, Chemical Solid, Project Cargo, Deberths Cargo	0.038 m³/Ton	0.017 m³/Ton

(I) Raw Material Consumption

Name of Raw Material	Name of Products	Consumption of Raw Material per Unit of Product	
		During the previous financial year (2020-21)	During the current financial year (2021-22)
NIL*	Not Applicable	Nil	Nil

* Unit does not have any manufacturing process

PART – C

Pollutants discharged to Environment/Unit of Output

(Parameters as specified in consent issued)

Pollutants	Quantity of pollutants discharged (Kilos/day)	Concentrations of pollutants in discharges (mg/Nm³)	Percentage of variation from prescribed standards with reasons
(a) Water	Nil*		
(b) Air	Monitoring data attached as Annexure-I		

Unit does not manufacture anything, or is a service industry (Farm engaged in supplies and storage of cargo). No effluents are generated. Fuel the unit. Invoiced value from the SD is used for notification purposes.

PART – D

Hazardous Wastes

(As specified under Hazardous Wastes (Management and Handling Rules, 1989)

Hazardous Wastes	Total Quantity	
	During the previous financial year (2020-21)	During the current financial year (2021-22)
(a) From Process Used oil /Spent oil	30,680 KL	9,020 KL
(b) From Process Oil containing cargo residue, Washing water and Sludge (Waste Oil)	1,033,530 KL	1,142,382 KL
(c) From Process Chemical Containing Cargo residue and Sludge/ waste/Residue containing oil	Nil	Nil
(d) From Process Sludge and Discarded/contaminated oil/ Process waste, Residues of sludge /Contaminated cotton rags or other cleaning materials	2,128 KL	2,676 KL
(e) From Process Ash from incineration of Hazardous waste, Flue gas cleaning residues	NA	Nil
(f) From Process Empty barrels / Containers / Liners contaminated with hazardous chemicals / wastes	NA	Nil
(g) From Pollution Control Facilities	Nil	Nil

PART – E

Solid Waste

Solid Waste	Total Quantity Generated (MT/Annum)	
	During the previous financial year (2020-21)	During the current financial year (2021-22)
(a) From Process (Part)	Nil	Nil
(b) From Pollution Control Facilities	4,345 MT/Annum	4,000 MT/Annum
(c) (i) Quantity recycled or reutilised within the unit	4,345 MT/Annum	4,000 MT/Annum
(c) (ii) Sold	Nil	Nil
(c) (iii) Disposed	Nil	Nil

PART – F

Please specify the characteristics (in terms of Composition and quantity) of Hazardous as well as other waste and indicate disposal practice adopted for both these categories of wastes

Hazardous Waste			
Sl. No	Name of waste	Generation quantity	Disposal method
	Used Oil (Spent Oil)	9.020 KL	Sold to Authorised Recyclers /Re-processors
2	Oil containing cargo residue, Washing water and Slops (Waste Oil)	1165.250 KL	Sold to Authorised Recyclers / Re-processors
3	Chemical Containing Cargo residue and sludge/ waste/Residue containing oil	Nil	NA
4	Sludge and Filter contaminated with oil / Process waste, Residues and sludge /Contaminated cotton rags or other cleaning materials	0.275 MT	ADC for co-processing /treatment /storage/Stored in HW shed
5	Ash from incineration of hazardous waste, Flue gas cleaning residues	Nil	NA
6	Empty Cartridge / Containers / Liners contaminated with Hazardous chemicals /wastes	Nil	NA

DPCL has got the authorisation from OSPCB vide letter no. IND-06-IWA-596/2020 on dated 28.05.2020 for handling of hazardous waste which is valid till 30.08.2025.

Solid Waste

Sl. No	Name of waste	Generation quantity	Disposal method
1	Paper waste	2.222 MT	Recycled through third party vendor
2	Plastic waste	58.223 MT	Sent to M/s ACC Limited for co-processing/energy recovery
3	Glass Waste	2.099 MT	Sold to scrap vendor for recycling.
4	Textile waste	158.460 MT	Used for making container for vehicle fuel use.
5	STP Sludge	4.000 MT	Used as manure in horticulture work

PART – G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production

- DPCL has three nos. of sewing road sweeper to about 5000 m in a sewing area for collection of effluent and rain water from stack yard area. The treated water is further being reused for dust suppression & spritz by on road.
- Wastewater generated from Port and township is being treated in four nos. of sewage treatment plant (STP) of capacity 150 KLD, 150 KLD, 25 KLD & 25 KLD. The treated water is being used for horticulture/gardening purpose.
- Effluent Treatment Plant is used for treatment of wastewater generated from vehicle washing. Treated water from the ETP is again reused for vehicle washing.
- 20 nos. of mechanised road sweeping machines have been deployed for cleaning of road on regular basis.
- 2 nos. mist cannons have been deployed for suppression of fugitive dust emissions.
- Regular monitoring of Ambient Air Quality has MOEFCC approved agency and results are presented environmental management cell only.
- Green belt has been developed inside & outside of the port.
- During the financial year 2021-22, the total amount of Rs. 22.25 Crores was incurred on environmental protection measures.
- 50 KL capacity of rainwater harvesting structure has been constructed for recharge of rainwater in plantation purpose.
- Trawler has been provided to Forest Department, Goa, at Cotigao for patrolling purpose for conservation of Olive Ridley turtle.
- Two nos. of floating boat, one motorboat and a motor vehicle has been provided to Forest Department, GoG for conservation of Karwar Sand Island.

PART – H

Additional measures /investment/ proposal for environmental protection including abatement of pollution, prevention of pollution.

Solid Pollution

- Purchase of renewable energy to fulfill energy requirement.
- Use of renewable energy (Solar lighting power).
- Switching over to energy efficient from diesel operated.
- Use of LED Lighting in inside and outside lighting.
- Use of environmental friendly lights in roads and common areas.
- Usage of Ozone friendly gases in AC and UPS systems.
- Use of air cloth breather filters of compressors in lighting site.

Air management

- Use of [illegible] for fugitive dust suppression at [illegible] stack yard
- Mechanized [illegible] machines
- Air wash system before wagon tippling
- Closed conveyor system
- Temporary covering of rail wagons in Wagon tippling shed
- Wagon cargo washing by closed [illegible] system
- Mechanized handling (loading & unloading) of cargo from ship
- Dust suppression system at conveyor [illegible] and transfer points
- Water sprinkling on [illegible] yard [illegible] roads
- Dedusted [illegible] for [illegible]
- Use of mobile [illegible] for control of fugitive emission

Water management

- Zero effluent discharge from Port premises
- Use of [illegible] of STP for [illegible] of domestic wastewater
- Reuse of STP treated wastewater for gardening and horticulture purpose
- Use of ETP for improved efficiency [illegible] at vehicle washing station
- Reuse of ETP treated wastewater for vehicle washing
- Rain water harvesting and [illegible] runoff water management
- Reuse of Settling Pond treated water for dust suppression and sprinkling on roads
- Installation of water meter for monitoring the water usage
- Use of drip irrigation in gardening and horticulture work
- Installation of 50 KLD rainwater harvesting structure

Waste Management

- Authorized [illegible] waste to landfill in case of [illegible] waste
- Energy recovery from other waste and [illegible] waste by co-processing at ACC [illegible]
- Port certified as Single Use Plastic (SUP) free Port by MoSDE
- Implementation of 3R concept in waste management
- Waste to wealth initiative implemented
- Utilization of STP sludge as manure for horticulture use

Bio-Diversity Conservation

- Around 9 ha of the mangrove area situated at south side of our port is being conserved and protected by blocking the creek at its outlet area with proper bamboo fencing and providing material support to maintain the natural ecosystem.
- Further around 4,400 mangroves have been planted for conservation of mangroves.
- Degraded forest patch/ grassy lands adjacent to Port periphery at Kramangar, Dachiya, Kandapasani, Bahirdangar & Pabani village are being developed by planting trees in coordination with forest department, GoO.
- DPC provides support to Forest department for conservation of Dhamra sand island.
- Specially designed "dark sky friendly" lights used in the port and township area which are turtle friendly.
- Adopting horizontal mounting lights and its periodic checking.
- Melinga vector [illegible] model for Blue [illegible] are installed.
- Awareness programmes have been conducted in nearby village as well as inside the port premises by DPC regarding the conservation of the Sea turtle Olive Ridley, mangrove conservation etc.
- Distribution of plants and seedling among local people for development of green ecosystem.

PART – I

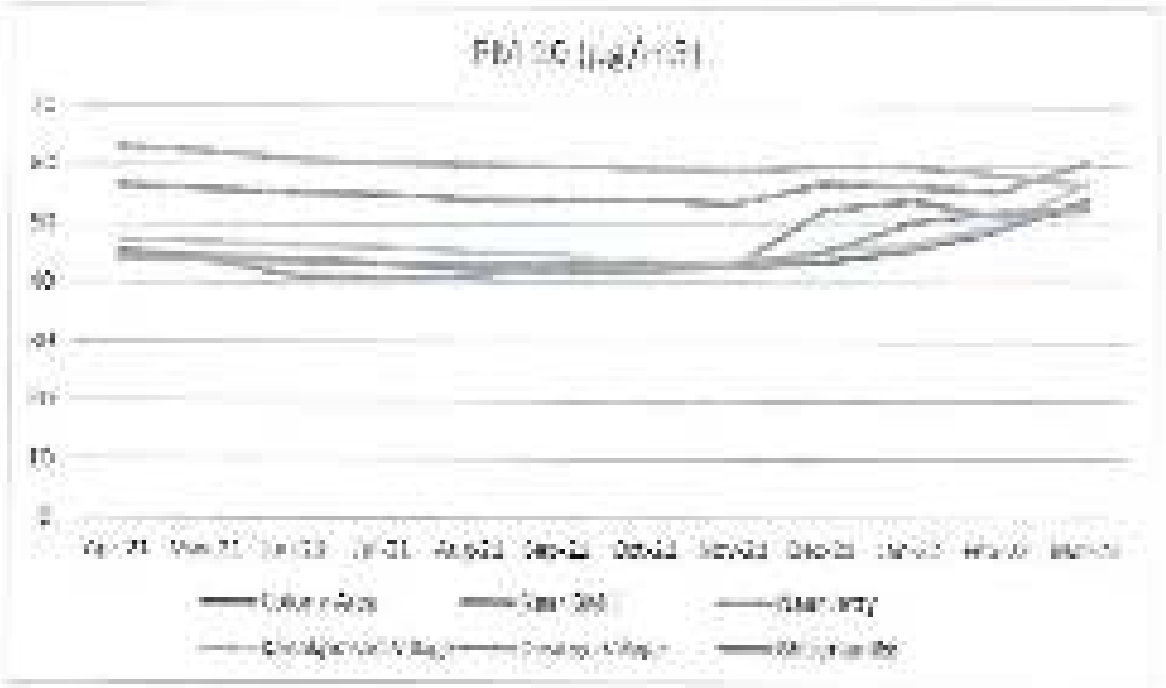
Any other particulars for improving the quality of environment:

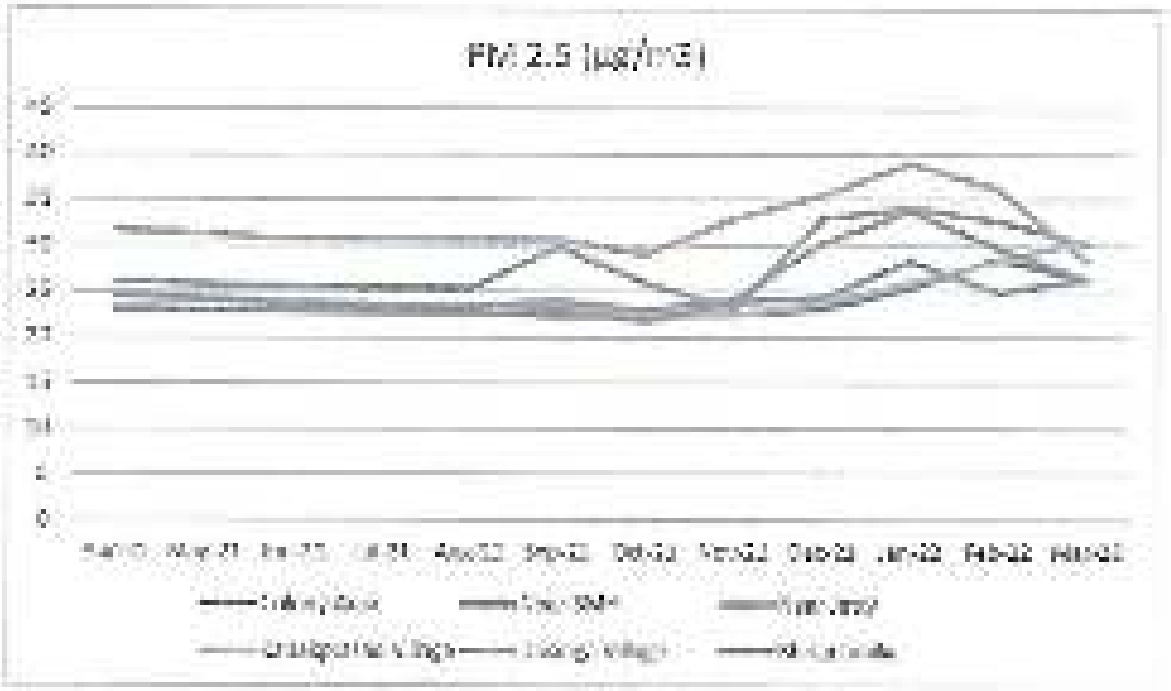
- Dhamra Port committed to promote a culture seeking continual improvement in Environment performance of the organisation.
- Dhamra Port emphasises on implementing Environmental Management System to optimize its resource consumption, improve efficiencies, reduce wastes by adopting 5R principles and enhance operational safety to minimize environmental risks. The environmental concerns are considered and addressed sufficiently during planning, project development and operations.
- Specialized illumination system in line with International Dark Sky Association (IDSA) guidelines installed to avoid illuminating the sky or focusing light towards seas. Sodium vapour lamps are being used instead of mercury lamp. All roads, lighting poles, way lighting and lighting mounted on roads or other elevated structures are of full cut off luminaries.
- DPCL has made an effective contribution towards Environment Protection, management and Conservation during this year.
- Under the leadership of Hon'ble Minister's Shri Naba Kisore, APSCZ has developed a sister new making itself "A Zero waste to landfill Company". APSCZ's vision is based on adoption of 5 R's principle of waste management, i.e., Reduce, Reuse, Recycle, Recover & Recover.
- 100 % wastewater generated is being reused and recycled.
- Waste canteen are being segregated in two strip for collection of wastes in dustbins from ownership residents so as to collect other waste apart from garbage. The main intention is to make the area waste free and for minimizing waste collection charges to residents.
- DPCL believes in sustainable development and are committed to save biodiversity rich areas. We are regularly monitoring our footprints on environment.
- Adopted the 5Rs principle in our Port premises.
- Achieved Zero Plastic compliance in our Port Premises.
- Single Use Plastic free port declared by M/s OL
- Waste paper Recycling
- Use of Eco-friendly product which is made of waste paper.
- Installation of 542 kwp Roof top solar power.

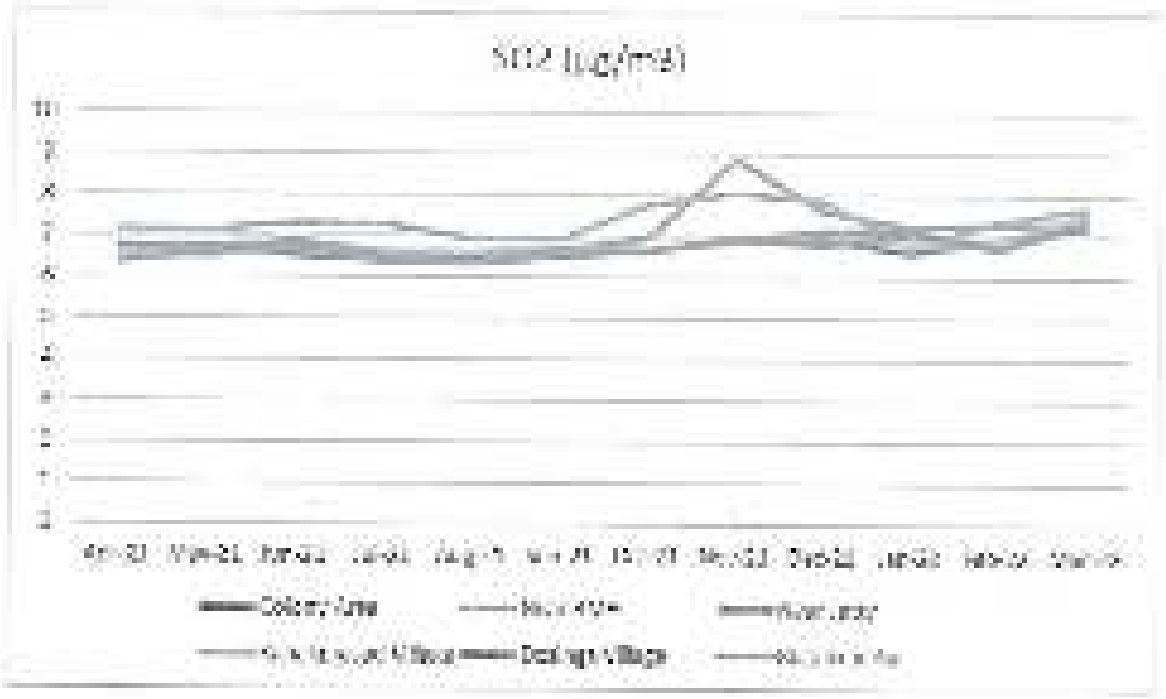
Date: 31-09-2022

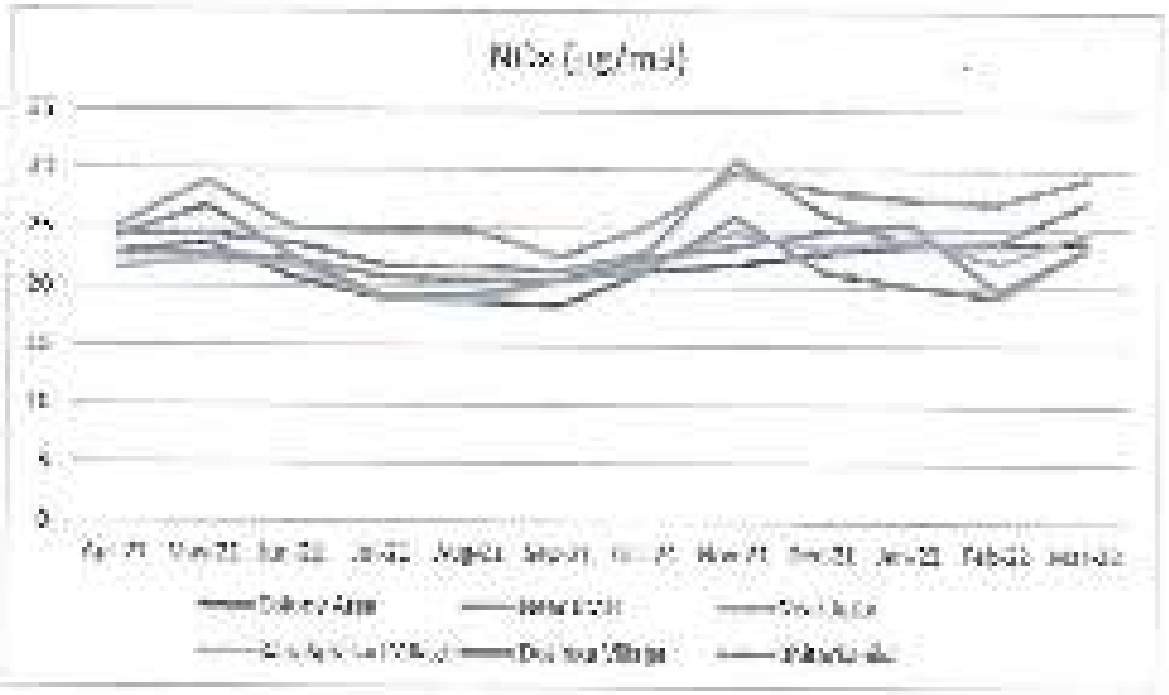
[Signature of a person carrying out an industry, operation or process]
Name: Sagar Nayak
Designation: HOD Environment
Address: The Dhamra Port Company Limited
AP/20, Chelligo, Vill. Bhanaja,
Dist Bhadrak, Odisha-756171

Annexure 3






SO2 (µg/m3)


NOx (µg/m3)

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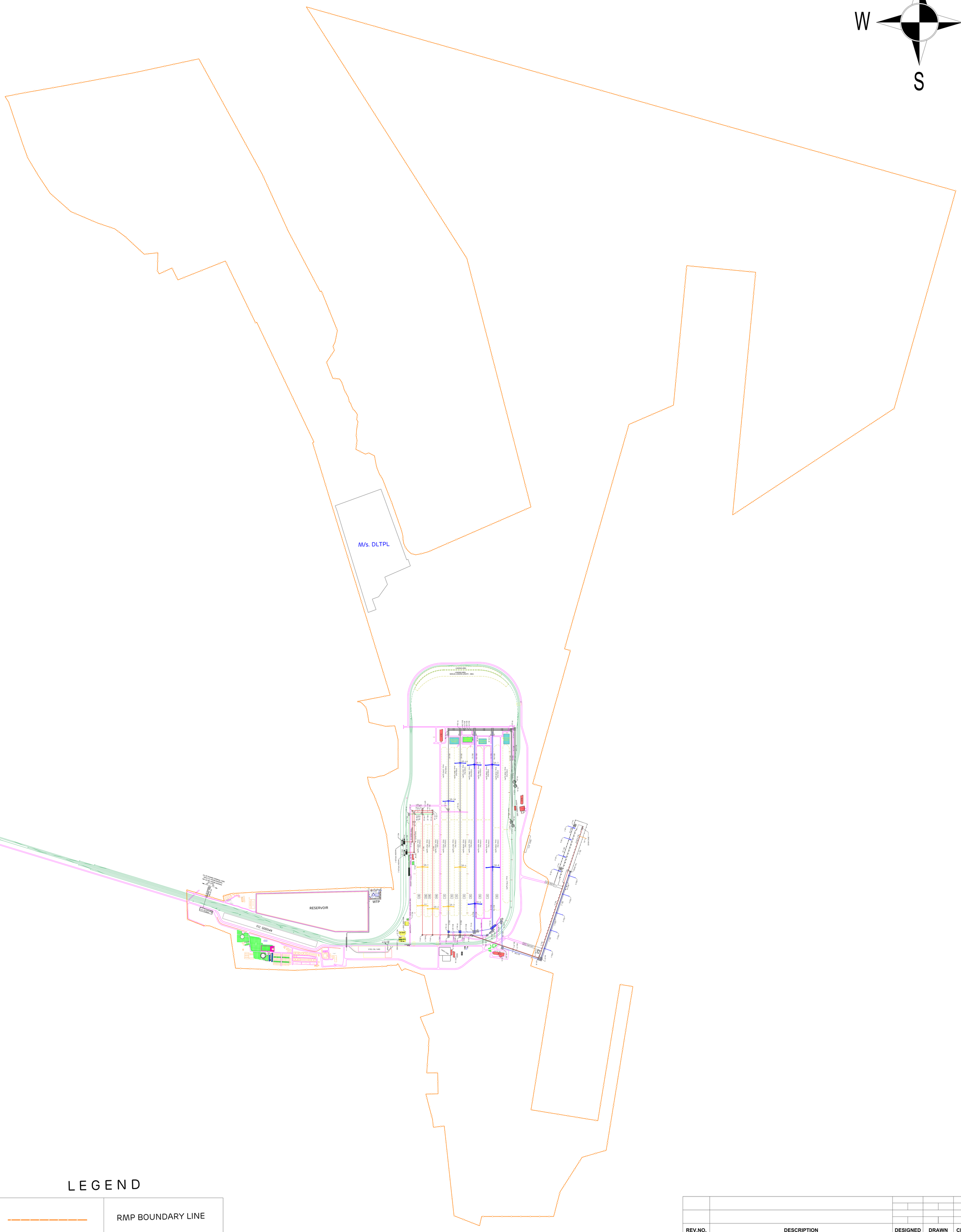

LEGEND

	RMP BOUNDARY LINE
	ROAD
	RAILWAY LINE
	EXPORT ROUTE (MHS)
	IMPORT ROUTE (MHS)
	STACK YARD
	M/s. DLTPL AREA

REV.NO.	DESCRIPTION	DESIGNED	DRAWN	CHECKED	APPROVED

REVISIONS

The Dhamra Port Company Limited

(A Wholly Subsidiary of APSEZ)

At/Po- Dosinga, Dhamra, Dist- Bhadrak, Odisha, -756171

	NAME	SIGN	DATE
DRWN	SKM		05.10.2020
CHKD	KK		05.10.2020
APPD	KK		05.10.2020

TITLE :

LAYOUT PLAN OF REVISED MASTER PLAN

SCALE 1: 2500

PROJECTION

DRG. No. **DPCL-ENV-0004**

SHEET 1 OF 1

SIZE **A0**

REV. **0**