

DPCL/ENV/MOEFCC/2023-040

22.05.2023

To

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

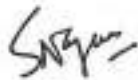
Sub : Half yearly Compliance report of Environment & CRZ clearance for expansion of Dhamra Port at Dhamra, Bhadrak, Odisha for the period Oct'22 to Mar'23.

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

Dear Sir,

With reference to the above-mentioned letter for the said subject matter, please find enclosed herewith the compliance to the conditions stipulated in the letter for the period Oct'22 to Mar'23 in soft copy for your kind reference. The said period compliance report is also being e-mailed to 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, Parivesh Bhawan, A/118, Unit 8, Nilakantha Nagar, Nayapalli, Bhubneswar-751012
- 4) The Regional Officer, State Pollution Control Board, Odisha, Plot no. 1602, Ganeshwarpur, Januganj, Balasore – 756019
- 5) Member Secretary OCZMA & Director, Env-cum-Spl. Secretary to Govt., Forest & Environment Dept., Govt. of Odisha, Plot No 108, Surya Nagar, Unit-VII, Bhubaneswar - 751003.

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 15 th 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. <ul style="list-style-type: none"> • Use of dust suppression system in hopper, conveyor belt and transfer points. • Pre wetting of cargo before tipping 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 15 th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	Conditions	Compliance Status
		<ul style="list-style-type: none"> 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-I). 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 Oct'22 to Mar'23 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 Oct'22 to Mar'23, total maintenance dredging was 3.23 MCM and Capital dredging is 1.31 MCM. Out of which 1.9 MCM was used for reclamation during Oct'22 to Mar'23. 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.



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
	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 Oct'22 to Mar'23 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 Oct'22 to Mar'23 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 <ul style="list-style-type: none"> • 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 turbidity 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 Oct'22 to Mar'23 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



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 15 th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
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.	<p>Noted</p> <p>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.</p> <p>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".</p> <p>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.</p> <p>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</p> <p>The E-Waste are sent to an authorized recycler for proper disposal as per the E-Waste Management Rules, 2016.</p>
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	<p>Noted & is being complied.</p> <p>The following initiatives are being taken for conservation of electrical energy:</p> <ol style="list-style-type: none"> 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 15 th 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 14.03.2023.
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 MSIHG Guidelines are followed for handling of Hazardous materials. First aid center facilities have been provided for employees and workers. In line 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.7.89 Crore has been spent towards Environment management for the period of Oct'22 to Mar'23 and the detail 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 Oct'22 to Mar'23 and the details expenses breakup, totaling to Rs. 8.47 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 15 th 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 SO ₂ and NO _x in reference to SO ₂ and NO _x 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 <ul style="list-style-type: none"> • 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 15 th 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.	<ul style="list-style-type: none"> • 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 tipping 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 Oct'22 to Mar'23.
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 15 th 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 15 th 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 14.03.2023.
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/MOEF&CC. 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.	37305.108 KL of wastewater generated during Oct'22 to Mar'23 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 15 th 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, <ul style="list-style-type: none"> • 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 Oct'22 to Mar'23. 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 15 th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	Conditions	Compliance Status
		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 Oct'22 to Mar'23, a total quantity of 204 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 Oct'22 to Mar'23, a total quantity of 204 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 15 th 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 30000 nos. of native trees have been planted in degraded village forest land and 1500 nos. of trees have been planted in Port during Oct'22 to Mar'23. 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, Peltophorum, 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. As a part of existing operation, Periodic marine water quality monitoring including turbidity is carried out near Kanika island by engaging MOEFCC



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 15 th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	Conditions	Compliance Status
		approved laboratory. The details of Marine Water quality monitoring reports for the period from Oct'22 to Mar'23 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.
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	Not Applicable.



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
	for the temporary storage of asbestos materials at site before disposal to CTSDF.	
IV	Safety training shall be given to all workers specific to their work area and every worker and employee will be engaged in fire hazard awareness training and mock drills which will be conducted regularly. All standard safety and occupational hazard measures shall be implemented and monitored by the concerned officials to prevent the occurrence of untoward incidents/ accidents	Complied. The employees, workers of DPCL have been trained on safety guidelines. Regular Fire training, Mock Drills are conducted as per the Crisis Management Plan. The details of drills, Safety training, Fire training conducted towards dock safety for the period Oct'22 to Mar'23 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.
VII	Occupational health surveillance of the workers shall be done on a regular basis	Complied Occupational Health Surveillance of the workers is being carried out on half yearly basis at the time of gate pass renewal.
X. Corporate Environment Responsibility:		
I	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six monthly report.	Noted. Copy of APSEZ Environment policy was submitted along with half yearly compliance report vide our letter no. DPCL/ENV/MOEFCC/2020-113 dated 23.11.2020.
II	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior	DPCL has a well-structured Environmental Management Cell, staffed with qualified manpower at site supported by team at Head Office in Ahmedabad.

Saha



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
	Executive, who will directly report to the head of the organization.	
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/2022-121 dated 29.11.2022.
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	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




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
	(Protection) Rules, 1986, as amended subsequently and put on the website of the company	
VI	The criteria pollutant levels namely; PM _{2.5} , PM ₁₀ , SO ₂ , NO _x (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 was submitted vide our letter no. DPCL/ENV/OSPCB/2022-093 dated 21.09.2022.
XI	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted
XII	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Noted
XIII	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted
XIV	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Noted and is complied with full cooperation during the inspection.
XV	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary	Noted

S/R



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 15 th November 2019 Ref. No. F.No.11-104/2009-1A-III.		
S. No.	Conditions	Compliance Status
	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



S. K. Saha

List of Annexures

Sl.No	Annexure Number	Details
01	Annexure-I	Environment Monitoring Report
02	Annexure-II	Environment Management Plan
03	Annexure-III	Environment Management Expenses
04	Annexure-IV	CSR Plan & Expenditure details
05	Annexure-V	Corporate Environment Responsibility
06	Annexure-VI	List of Oil Spill Control Equipment
07	Annexure-VII	Greenbelt Photograph
08	Annexure-VIII	Fire Training and Mock drill

Annexure - I

**Environment Monitoring Report
The Dhamra Port Company Limited
Period- Oct'22 to Mar'23**

Mitra S. K. Private Limited

Plot No-887/2428, Ekamra Villa Square,
Jaydev Vihar, 1st Floor, IRC Village,
Bhubaneswar, Khordha, Odisha-751015
[CIN: U51909WB1956PTC023037]



T : (0674) 2360917, 9777450189
F : (0674) 2362918

AMBIENT AIR QUALITY MONITORING REPORT

(October 2022 -March 2023)

MONTH	PARAMETERS	COLONY	KANAKA PRASAD	JETTY	BMH	DOSINGA	BHITARKANIKA	
October-2022	PM ₁₀	Max	62.80	59.30	72.90	71.80	59.40	56.40
		Min	47.50	40.90	54.80	48.80	44.40	40.40
		Avg	54.45	50.75	62.47	59.28	51.46	49.12
November-2022	PM ₁₀	Max	62.70	60.60	78.40	70.43	64.50	59.40
		Min	48.40	44.43	60.80	55.50	45.90	44.40
		Avg	56.95	53.50	70.59	62.86	56.75	51.46
December-2022	PM ₁₀	Max	69.40	65.20	78.50	78.40	68.60	58.70
		Min	52.10	52.50	63.70	58.20	42.80	40.10
		Avg	59.69	58.24	71.14	68.46	54.81	49.40
January-2023	PM ₁₀	Max	68.70	67.10	78.90	72.10	61.20	52.60
		Min	51.60	55.70	64.20	52.20	40.20	40.30
		Avg	58.98	60.87	72.01	61.86	50.69	46.80
February-2023	PM ₁₀	Max	64.90	65.20	75.10	72.50	60.40	56.90
		Min	50.10	52.80	61.70	60.70	43.20	40.80
		Avg	57.97	59.36	69.30	66.42	51.37	48.21
March-2023	PM ₁₀	Max	66.30	68.10	79.40	75.50	66.70	58.90
		Min	44.80	44.50	58.10	58.10	48.40	40.50
		Avg	55.69	55.46	70.78	68.62	56.92	49.53
Particulate Matter (PM_{2.5})								
October-2022	PM _{2.5}	Max	29.70	29.60	37.10	35.30	32.60	27.80
		Min	20.80	21.30	25.20	24.50	20.90	20.10
		Avg	25.32	25.75	31.25	29.85	25.69	24.40
November-2022	PM _{2.5}	Max	32.40	30.10	39.40	37.40	38.90	32.60
		Min	24.40	22.40	30.10	21.90	20.30	20.90
		Avg	28.73	26.53	35.00	29.51	28.24	25.60
December-2022	PM _{2.5}	Max	33.40	32.60	39.80	33.80	33.60	29.70
		Min	22.50	20.10	29.10	25.70	22.10	21.70
		Avg	28.23	27.49	34.90	29.82	28.54	25.71
January-2023	PM _{2.5}	Max	33.90	33.50	41.60	35.70	30.80	32.40
		Min	22.60	26.40	33.40	26.80	20.20	23.70
		Avg	28.76	29.81	36.68	31.21	26.69	29.36
February-2023	PM _{2.5}	Max	36.80	32.60	38.10	37.70	33.50	30.10
		Min	26.70	22.10	28.20	30.10	22.10	24.70
		Avg	30.58	28.10	33.63	33.59	29.16	27.33
March-2023	PM _{2.5}	Max	32.80	33.70	39.20	36.40	34.20	30.30
		Min	21.50	20.40	28.50	25.20	24.70	20.10
		Avg	26.86	27.25	33.98	30.75	29.19	25.23

T : (0674) 2360917, 9777450189

F : (0674) 2362918

AMBIENT AIR QUALITY MONITORING REPORT (October 2022-March 2023)

MONTH			COLONY	KANAKA	JETTY	BMH	DOSINGA	BHITARKANIKA
October-2022	SO ₂	Max	8.10	7.60	8.40	8.90	7.50	7.50
		Min	6.20	6.10	6.90	6.10	6.10	6.10
		Avg	6.82	6.81	7.60	7.49	6.67	6.58
November-2022	SO ₂	Max	8.90	7.50	9.60	9.10	8.40	7.80
		Min	6.40	6.10	7.40	6.60	6.10	6.10
		Avg	7.53	6.89	8.60	7.82	7.17	7.17
December-2022	SO ₂	Max	8.10	7.70	9.60	8.60	7.80	7.60
		Min	6.10	6.10	7.10	6.20	6.30	6.10
		Avg	7.00	6.89	8.40	7.47	6.96	6.77
January-2023	SO ₂	Max	7.80	7.90	8.80	8.40	7.80	7.80
		Min	6.20	6.40	7.10	6.70	6.10	6.10
		Avg	6.88	7.05	7.83	7.51	6.83	6.78
February-2023	SO ₂	Max	8.20	7.90	8.60	8.50	7.90	7.90
		Min	6.10	6.10	6.70	6.30	6.50	6.40
		Avg	7.03	6.95	7.68	7.17	7.22	7.05
March-2023	SO ₂	Max	8.30	7.60	8.50	8.40	7.70	7.60
		Min	6.10	6.30	6.40	6.20	6.20	6.30
		Avg	7.26	6.88	7.50	7.41	6.89	6.90
Oxides of Nitrogen (NOx)								
October-2022	NOx	Max	22.60	25.80	34.20	37.60	26.30	28.70
		Min	16.20	17.40	26.20	22.10	16.40	15.10
		Avg	19.17	22.41	30.76	29.85	22.10	20.70
November-2022	NOx	Max	37.10	26.10	37.20	32.50	34.80	27.40
		Min	19.70	17.40	28.60	22.70	14.50	19.80
		Avg	26.39	22.10	32.88	27.87	23.60	23.52
December-2022	NOx	Max	30.60	28.70	36.50	30.60	26.70	27.70
		Min	18.90	20.10	30.20	21.50	18.40	16.50
		Avg	25.02	24.77	33.34	26.60	23.31	22.61
January-2023	NOx	Max	27.50	28.50	34.40	31.10	31.50	29.80
		Min	16.80	21.60	24.80	25.30	16.20	17.10
		Avg	22.17	25.24	29.72	28.33	24.77	24.44
February-2023	NOx	Max	31.10	31.80	39.80	35.70	30.80	30.10
		Min	21.80	18.40	24.70	24.50	19.70	20.70
		Avg	25.76	25.23	32.60	30.02	24.26	25.73
March-2023	NOx	Max	30.40	31.60	38.70	33.10	32.50	30.50
		Min	18.40	15.10	24.70	20.20	20.70	15.40
		Avg	24.11	24.12	31.82	26.44	24.94	22.07

Mitra S. K. Private Limited

Plot No-687/2426, Ekamra Villa Square,
Jaydev Vihar, 1st Floor, IRC Village,
Bhubaneswar, Khordha, Odisha-751015
[CIN: U51909WB1956PTC023037]



T : (0674) 2360917, 9777450189

F : (0674) 2362918

AMBIENT AIR QUALITY MONITORING REPORT (October 2022 -March 2023)

MONTH	PARAMETERS	COLONY	KANAKA PRASAD	JETTY	BMH	DOSINGA	BHITARKANIKA	
October-2022	CO	Max	0.52	0.47	0.6	0.62	0.57	0.47
		Min	0.18	0.18	0.26	0.30	0.17	0.18
		Avg	0.33	0.33	0.46	0.45	0.33	0.34
November-2022	CO	Max	0.82	0.81	0.93	0.87	0.79	0.78
		Min	0.49	0.47	0.69	0.62	0.54	0.47
		Avg	0.64	0.63	0.80	0.73	0.65	0.61
December-2022	CO	Max	0.77	0.72	0.91	0.75	0.72	0.69
		Min	0.42	0.42	0.61	0.55	0.42	0.42
		Avg	0.60	0.56	0.77	0.64	0.55	0.55
January-2023	CO	Max	0.74	0.78	0.80	0.75	0.69	0.62
		Min	0.42	0.56	0.51	0.49	0.45	0.40
		Avg	0.57	0.65	0.66	0.63	0.56	0.53
February-2023	CO	Max	0.74	0.79	0.94	0.81	0.71	0.65
		Min	0.49	0.49	0.62	0.59	0.45	0.41
		Avg	0.63	0.65	0.75	0.69	0.58	0.52
March-2023	CO	Max	0.71	0.68	0.84	0.76	0.69	0.67
		Min	0.55	0.52	0.67	0.44	0.47	0.47
		Avg	0.62	0.59	0.74	0.60	0.57	0.55
Ammonia (NH₃)								
October-2022	NH ₃	Max	22.30	25.20	36.80	30.10	24.50	20.80
		Min	12.60	12.90	26.70	18.30	12.30	12.70
		Avg	17.85	19.90	30.39	23.00	18.92	16.57
November-2022	NH ₃	Max	25.10	23.70	44.20	41.30	27.60	25.10
		Min	12.30	12.90	27.10	19.70	12.80	13.60
		Avg	19.18	18.77	36.66	29.63	20.59	19.91
December-2022	NH ₃	Max	29.60	27.50	42.70	31.70	23.30	27.20
		Min	13.80	12.70	24.70	17.50	14.70	12.80
		Avg	21.02	20.63	34.08	25.03	19.31	20.06
January-2023	NH ₃	Max	22.10	24.30	33.60	30.90	27.30	26.30
		Min	12.90	15.90	20.70	20.30	12.90	12.10
		Avg	17.76	20.59	27.52	25.40	20.19	19.92
February-2023	NH ₃	Max	25.30	27.80	25.60	32.60	26.40	22.80
		Min	14.60	12.80	19.80	18.50	13.60	12.60
		Avg	20.05	20.04	28.22	24.46	19.47	17.69
March-2023	NH ₃	Max	26.10	30.10	34.20	31.20	24.40	22.30
		Min	12.70	12.30	20.90	13.80	15.80	12.60
		Avg	18.98	20.49	28.59	21.95	20.70	17.36

Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,
Jaydev Vihar, 1st Floor, IRC Village,
Bhubaneswar, Khordha, Odisha-751015
[CIN: U51909WB1956PTC023037]



T : (0674) 2360917, 9777450189
F : (0674) 2362918

AMBIENT AIR QUALITY MONITORING REPORT (October 2022 -March 2023)

MONTH	PARAMETERS	COLONY	KANAKA PRASAD	JETTY	BMH	DOSINGA	BHITARKANIKA
October-2022	O ₃	Max	<20.0	<20.0	<20.0	<20.0	<20.0
		Min	<20.0	<20.0	<20.0	<20.0	<20.0
		Avg	<20.0	<20.0	<20.0	<20.0	<20.0
November-2022	O ₃	Max	<20.0	<20.0	<20.0	<20.0	<20.0
		Min	<20.0	<20.0	<20.0	<20.0	<20.0
		Avg	<20.0	<20.0	<20.0	<20.0	<20.0
December-2022	O ₃	Max	<20.0	<20.0	<20.0	<20.0	<20.0
		Min	<20.0	<20.0	<20.0	<20.0	<20.0
		Avg	<20.0	<20.0	<20.0	<20.0	<20.0
January-2023	O ₃	Max	<20.0	<20.0	<20.0	<20.0	<20.0
		Min	<20.0	<20.0	<20.0	<20.0	<20.0
		Avg	<20.0	<20.0	<20.0	<20.0	<20.0
February-2023	O ₃	Max	<20.0	<20.0	<20.0	<20.0	<20.0
		Min	<20.0	<20.0	<20.0	<20.0	<20.0
		Avg	<20.0	<20.0	<20.0	<20.0	<20.0
March-2023	O ₃	Max	<20.0	<20.0	<20.0	<20.0	<20.0
		Min	<20.0	<20.0	<20.0	<20.0	<20.0
		Avg	<20.0	<20.0	<20.0	<20.0	<20.0
Lead (Pb)							
October-2022	Pb	Max	<0.01	<0.01	<0.01	<0.01	<0.01
		Min	<0.01	<0.01	<0.01	<0.01	<0.01
		Avg	<0.01	<0.01	<0.01	<0.01	<0.01
November-2022	Pb	Max	<0.01	<0.01	<0.01	<0.01	<0.01
		Min	<0.01	<0.01	<0.01	<0.01	<0.01
		Avg	<0.01	<0.01	<0.01	<0.01	<0.01
December-2022	Pb	Max	<0.01	<0.01	<0.01	<0.01	<0.01
		Min	<0.01	<0.01	<0.01	<0.01	<0.01
		Avg	<0.01	<0.01	<0.01	<0.01	<0.01
January-2023	Pb	Max	<0.01	<0.01	<0.01	<0.01	<0.01
		Min	<0.01	<0.01	<0.01	<0.01	<0.01
		Avg	<0.01	<0.01	<0.01	<0.01	<0.01
February-2023	Pb	Max	<0.01	<0.01	<0.01	<0.01	<0.01
		Min	<0.01	<0.01	<0.01	<0.01	<0.01
		Avg	<0.01	<0.01	<0.01	<0.01	<0.01
March-2023	Pb	Max	<0.01	<0.01	<0.01	<0.01	<0.01
		Min	<0.01	<0.01	<0.01	<0.01	<0.01
		Avg	<0.01	<0.01	<0.01	<0.01	<0.01

Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,
Jaydev Vihar, 1st Floor, IRC Village,
Bhubaneswar, Khordha, Odisha-751015
[CIN: U51909WB1956PTC023037]



T : (0674) 2360917, 9777450189

F : (0674) 2362918

AMBIENT AIR QUALITY MONITORING REPORT (October 2022 -March 2023)

MONTH	PARAMETERS	COLONY	KANAKA PRASAD	JETTY	BMH	DOSINGA	BHITARKANIKA
October-2022	Ni	Max	<5.0	<5.0	<5.0	<5.0	<5.0
		Min	<5.0	<5.0	<5.0	<5.0	<5.0
		Avg	<5.0	<5.0	<5.0	<5.0	<5.0
November-2022	Ni	Max	<5.0	<5.0	<5.0	<5.0	<5.0
		Min	<5.0	<5.0	<5.0	<5.0	<5.0
		Avg	<5.0	<5.0	<5.0	<5.0	<5.0
December-2022	Ni	Max	<5.0	<5.0	<5.0	<5.0	<5.0
		Min	<5.0	<5.0	<5.0	<5.0	<5.0
		Avg	<5.0	<5.0	<5.0	<5.0	<5.0
January-2023	Ni	Max	<5.0	<5.0	<5.0	<5.0	<5.0
		Min	<5.0	<5.0	<5.0	<5.0	<5.0
		Avg	<5.0	<5.0	<5.0	<5.0	<5.0
February-2023	Ni	Max	<5.0	<5.0	<5.0	<5.0	<5.0
		Min	<5.0	<5.0	<5.0	<5.0	<5.0
		Avg	<5.0	<5.0	<5.0	<5.0	<5.0
March-2023	Ni	Max	<5.0	<5.0	<5.0	<5.0	<5.0
		Min	<5.0	<5.0	<5.0	<5.0	<5.0
		Avg	<5.0	<5.0	<5.0	<5.0	<5.0
Arsenic (As)							
October-2022	As	Max	<1.0	<1.0	<1.0	<1.0	<1.0
		Min	<1.0	<1.0	<1.0	<1.0	<1.0
		Avg	<1.0	<1.0	<1.0	<1.0	<1.0
November-2022	As	Max	<1.0	<1.0	<1.0	<1.0	<1.0
		Min	<1.0	<1.0	<1.0	<1.0	<1.0
		Avg	<1.0	<1.0	<1.0	<1.0	<1.0
December-2022	As	Max	<1.0	<1.0	<1.0	<1.0	<1.0
		Min	<1.0	<1.0	<1.0	<1.0	<1.0
		Avg	<1.0	<1.0	<1.0	<1.0	<1.0
January-2023	As	Max	<1.0	<1.0	<1.0	<1.0	<1.0
		Min	<1.0	<1.0	<1.0	<1.0	<1.0
		Avg	<1.0	<1.0	<1.0	<1.0	<1.0
February-2023	As	Max	<1.0	<1.0	<1.0	<1.0	<1.0
		Min	<1.0	<1.0	<1.0	<1.0	<1.0
		Avg	<1.0	<1.0	<1.0	<1.0	<1.0
March-2023	As	Max	<1.0	<1.0	<1.0	<1.0	<1.0
		Min	<1.0	<1.0	<1.0	<1.0	<1.0
		Avg	<1.0	<1.0	<1.0	<1.0	<1.0

Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,
Jaydev Vihar, 1st Floor, IRC Village,
Bhubaneswar, Khordha, Odisha-751015
[CIN: U51909WB1956PTC023037]



T : (0674) 2360917, 9777450189
F : (0674) 2362918

AMBIENT AIR QUALITY MONITORING REPORT (October 2022 – March 2023)

MONTH	PARAMETERS	COLONY	KANAKA PRASAD	JETTY	BMH	DOSINGA	BHITARKANIKA
October-2022	C ₆ H ₆	Max	<4.2	<4.2	<4.2	<4.2	<4.2
		Min	<4.2	<4.2	<4.2	<4.2	<4.2
		Avg	<4.2	<4.2	<4.2	<4.2	<4.2
November-2022	C ₆ H ₆	Max	<4.2	<4.2	<4.2	<4.2	<4.2
		Min	<4.2	<4.2	<4.2	<4.2	<4.2
		Avg	<4.2	<4.2	<4.2	<4.2	<4.2
December-2022	C ₆ H ₆	Max	<4.2	<4.2	<4.2	<4.2	<4.2
		Min	<4.2	<4.2	<4.2	<4.2	<4.2
		Avg	<4.2	<4.2	<4.2	<4.2	<4.2
January-2023	C ₆ H ₆	Max	<4.2	<4.2	<4.2	<4.2	<4.2
		Min	<4.2	<4.2	<4.2	<4.2	<4.2
		Avg	<4.2	<4.2	<4.2	<4.2	<4.2
February-2023	C ₆ H ₆	Max	<4.2	<4.2	<4.2	<4.2	<4.2
		Min	<4.2	<4.2	<4.2	<4.2	<4.2
		Avg	<4.2	<4.2	<4.2	<4.2	<4.2
March-2023	C ₆ H ₆	Max	<4.2	<4.2	<4.2	<4.2	<4.2
		Min	<4.2	<4.2	<4.2	<4.2	<4.2
		Avg	<4.2	<4.2	<4.2	<4.2	<4.2
Benzo Pyrene (BaP)							
October-2022	Bap	Max	<0.5	<0.5	<0.5	<0.5	<0.5
		Min	<0.5	<0.5	<0.5	<0.5	<0.5
		Avg	<0.5	<0.5	<0.5	<0.5	<0.5
November-2022	Bap	Max	<0.5	<0.5	<0.5	<0.5	<0.5
		Min	<0.5	<0.5	<0.5	<0.5	<0.5
		Avg	<0.5	<0.5	<0.5	<0.5	<0.5
December-2022	Bap	Max	<0.5	<0.5	<0.5	<0.5	<0.5
		Min	<0.5	<0.5	<0.5	<0.5	<0.5
		Avg	<0.5	<0.5	<0.5	<0.5	<0.5
January-2023	Bap	Max	<0.5	<0.5	<0.5	<0.5	<0.5
		Min	<0.5	<0.5	<0.5	<0.5	<0.5
		Avg	<0.5	<0.5	<0.5	<0.5	<0.5
February-2023	Bap	Max	<0.5	<0.5	<0.5	<0.5	<0.5
		Min	<0.5	<0.5	<0.5	<0.5	<0.5
		Avg	<0.5	<0.5	<0.5	<0.5	<0.5
March-2023	Bap	Max	<0.5	<0.5	<0.5	<0.5	<0.5
		Min	<0.5	<0.5	<0.5	<0.5	<0.5
		Avg	<0.5	<0.5	<0.5	<0.5	<0.5

A. K. Rath

Mitra S. K. Private Limited

Plot No-897/2428, Ekamra Villa Square,
Jaydev Vihar, 1st Floor, IRC Village,
Bhubaneswar, Khordha, Odisha-751015
[CIN: U51909WB1956PTC023037]



T : (0674) 2360917, 9777450189
F : (0674) 2362918

NOISE LEVEL MONITORING REPORT (October 2022 – March 2023)

LOCATION		DAY TIME (Leq) in dB (A)	NIGHT TIME (Leq) in dB (A)
COLONY	Max	53.60	42.50
	Min	50.60	38.60
	Avg	51.77	40.07
KANAKA PRASAD	Max	51.60	39.60
	Min	47.40	36.50
	Avg	49.36	37.93
BMH	Max	71.90	55.40
	Min	62.90	44.80
	Avg	68.17	48.95
JETTY	Max	73.80	65.20
	Min	67.80	49.70
	Avg	71.10	57.10
DOSINGA	Max	48.40	39.20
	Min	42.50	36.90
	Avg	45.80	38.35
BHITARKANIKA	Max	46.50	38.40
	Min	38.60	36.20
	Avg	42.61	37.12

A. S. Datta

Mitra S. K. Private Limited

Plot No-887/2428, Ekamra Villa Square,
Jaydev Vihar, 1st Floor, IRC Village,
Bhubaneswar, Khordha, Odisha-751015
[CIN: U51909WB1956PTC023037]



T : (0674) 2360917, 9777450189

F : (0674) 2362918

GOUND WATER QUALITY MONITORING REPORT

(October 2022 -March 2023)

Parameters	Units	TOWNSHIP			RUNNING ROOM			WTP		
		Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
pH (at 20° C)	-	7.68	7.45	7.54	7.92	7.56	7.77	7.82	7.4	7.65
Sulphate (as SO ₄)	mg/l	70	46	57.25	72	55	62.28	67	60	63.28
Calcium (as Ca)	mg/l	54	29	47	56	42	47.71	56	49	51
Arsenic (as As)	mg/l	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)
Lead (as Pb)	mg/l	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)
Zinc (as Zn)	mg/l	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)
Copper (as Cu)	mg/l	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)
Mercury (as Hg)	mg/l	BDL (0.0002)	BDL (0.0002)	BDL (0.0002)	BDL (0.0002)	BDL (0.0002)	BDL (0.0002)	BDL (0.0002)	BDL (0.0002)	BDL (0.0002)
Cadmium (as Cd)	mg/l	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)
Mineral Oil	mg/l	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
Fluoride (as F)	mg/l	BDL (0.2)	BDL (0.2)	BDL (0.2)	BDL (0.2)	BDL (0.2)	BDL (0.2)	BDL (0.2)	BDL (0.2)	BDL (0.2)
Colour	Hazen	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)
Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity	NTU	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)
Residual free Chlorine	mg/l	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)
Iron (as Fe)	mg/l	BDL (0.05)	BDL (0.05)	BDL (0.05)	BDL (0.05)	BDL (0.05)	BDL (0.05)	BDL (0.05)	BDL (0.05)	BDL (0.05)
Chloride (as Cl)	mg/l	184	109	146.5	199	128	159.42	204	114	153.14
Total Dissolved Solids	mg/l	410	330	377	393	257	342.71	433	298	387.28
Alkalinity (as CaCO ₃)	mg/l	195	176	185.37	190	168	175.42	187	154	174.14
Aluminium (as Al)	mg/l	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)
Magnesium (as Mg)	mg/l	28	22	25	23	18	20.57	29	24	26.71
Total Hardness (as CaCO ₃)	mg/l	190	160	178	177	159	168.85	270	176	207.74
Boron (as B)	mg/l	BDL (0.3)	BDL (0.3)	BDL (0.3)	BDL (0.3)	BDL (0.3)	BDL (0.3)	BDL (0.3)	BDL (0.3)	BDL (0.3)
Manganese (as Mn)	mg/l	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)	BDL (0.02)
Nitrate (as NO ₃)	mg/l	BDL (0.4)	BDL (0.4)	BDL (0.4)	BDL (0.4)	BDL (0.4)	BDL (0.4)	BDL (0.4)	BDL (0.4)	BDL (0.4)
Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)	BDL (0.001)
Selenium (as Se)	mg/l	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)
Total Chromium	mg/l	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)	BDL (0.01)
Silver (as Ag)	mg/l	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)	BDL (0.005)

Continuation Sheet



Barium (as Ba)	mg/l	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)
Sulphide (as H ₂ S)	mg/l	BDL(0.02)	BDL(0.02)	BDL(0.02)	BDL(0.02)	BDL(0.02)	BDL(0.02)	BDL(0.02)	BDL(0.02)	BDL(0.02)
Ammonia (as total ammonia-N)	mg/l	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)
Chloramines	mg/l	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)	BDL(0.1)
Nickel (as Ni)	mg/l	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)
Cyanide (as CN)	mg/l	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)	BDL(0.01)
Anionic Detergents (as MBAS)	mg/l	BDL(0.05)	BDL(0.05)	BDL(0.05)	BDL(0.05)	BDL(0.05)	BDL(0.05)	BDL(0.05)	BDL(0.05)	BDL(0.05)
Polynuclear Aromatic Hydrocarbons(as PAH)	mg/l	BDL(0.0001)	BDL(0.0001)	BDL(0.0001)	BDL(0.0001)	BDL(0.0001)	BDL(0.0001)	BDL(0.0001)	BDL(0.0001)	BDL(0.0001)
Polychlorinated Biphenyls (PCB)	mg/l	BDL(0.0005)	BDL(0.0005)	BDL(0.0005)	BDL(0.0005)	BDL(0.0005)	BDL(0.0005)	BDL(0.0005)	BDL(0.0005)	BDL(0.0005)
Salinity	mg/l	51	41	44.5	55	40	47.71	49	46	47.28
E. Coli	/100ml	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Coliform Organism	/100ml	ND	ND	ND	ND	ND	ND	ND	ND	ND

A. K. Rathi

MONTHLY ENVIRONMENT MONITORING REPORT

MARCH- 2023

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



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

TEST REPORT

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

Report No. : BBS/404
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/01403
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 04.03.2023

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	----	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition)	----	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition)	6.0 – 8.5	6.99	7.33
4.	Appearance	----	--	Lab Method	----	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	66.0	6.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	84.0	7.6
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	----	210.0	18.5
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	7.6	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	----	20.4	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	----	33.8	2.1
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	----	2000.0	187.0

S. K. Ganguly
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

Mitra S. K. Private Limited

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

T : (0674) 2362916, 2360917
F : (0674) 2362916



TEST REPORT

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

Report No. : BBS/403
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/01401
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 04.03.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	----	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition)	----	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition)	6.0 – 8.5	6.58	7.89
4.	Appearance	----	--	Lab Method	----	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	92.0	10.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	118.0	8.0
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	----	238.0	24.6
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	12.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	----	17.6	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	----	27.5	1.4
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	----	2630.0	170.0

P. Kang
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

TEST REPORT

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

Report No. : BBS/402
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/01399
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 04.03.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	----	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition)	----	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition)	6.0 – 8.5	6.71	7.09
4.	Appearance	----	--	Lab Method	----	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	87.0	4.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	150.0	4.5
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	----	396.0	14.7
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	14.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	----	23.2	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	----	34.5	1.7
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition)	----	1780.0	79.0

S. K. Singh
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

TEST REPORT

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

Report No. : BBS/401
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/01397
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 04.03.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	----	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition)	----	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition)	6.0 – 8.5	6.94	7.44
4.	Appearance	----	--	Lab Method	----	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	110.0	8.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	139.0	6.9
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	----	367.0	16.8
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	11.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	----	26.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	----	39.0	2.4
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	----	2250.0	190.0

S. K. Ganguly
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

Mitra S. K. Private Limited

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

T : (0674) 2362916, 2360917
F : (0674) 2362918



TEST REPORT

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

Report No. : BBS/413
Date : 05.04.2023
Sample No. : MSKGL/FD/2022-23/03/00700
Date of sampling : 20.03.2023
Sampling Description : Ground Water
Sampling Location : Kanak Prasad
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No	Test Parameters	Units	Limit	Test Method / Specification	Result
1.	E. Coll	/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/fin: 2012	7.88
2.	Sulphate (as SO ₄)	mg/l	200	400	IS 3025 (Part 24)- 1986 R/fin: 2014	59.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 R/fin: 2014	62.0
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 R/fin: 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/fin: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 R/fin: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; R/fin:2012	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5)-1983 R/fin:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 R/fin: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 R/fin:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 R/fin: 2014	0.40
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 R/fin: 2014	139.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; R/fin:2012	430.0
19.	Alkalinity (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 23)- 1986 R/fin: 2009	179.0
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/fin: 2014	23.0
22.	Total Hardness (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 21)-2013	189.0
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 R/fin: 2014	3.8
26.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; R/fin: 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.	Safinity	mg/l	---	---	IS 3025 (Part 14)- 2013	40.0

Ref. No. BBS/413

Date- 05.04.2023

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

S. K. Singh
Report Prepared by:

For Mitra S. K. Private Limited.

A. K. Rathi
Authorized Signatory



Mitra S. K. Private Limited

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



T: (0674) 2362916, 2360917
F: (0674) 2362918

TEST REPORT

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

Report No. : BBS/414
Date : 05.04.2023
Sample No. : MSKGL/FD/2022-23/03/00701
Date of sampling : 20.03.2023
Sampling Description : Ground Water
Sampling Location : Balisahi
Sampling Done By : Mr. Kunja Bitari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 - 2012

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

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 - 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	---	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 R/fim: 2012	7.72
2.	Sulphate (as SO ₄)	mg/l	200	400	IS 3025 (Part 24)- 1986 R/fim: 2014	48.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 R/fim: 2014	51.6
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 R/fim: 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/fim: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 R/fim: 2013	0.41
12.	Colour	Hazen	5	15	3025 (Part 4)-1983: R/fim:2012	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5)-1983 R/fim:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 R/fim: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 R/fim:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 R/fim: 2014	0.24
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 R/fim: 2014	100.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984: R/fim:2012	357.0
19.	Alkalinity (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 23)- 1986 R/fim: 2009	177.0
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/fim: 2014	24.0
22.	Total Hardness (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 21)-2013	180.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO ₃)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 R/fim: 2014	1.5
26.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992: R/fim: 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

Ref. No. BBS/414

Date- 05.04.2023

32.	Sulphide (as H ₂ S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rf/m: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rf/m: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rf/m: 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)- 1985 Rf/m: 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 (23 rd Edn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

P. K. Ratz
Report Prepared by:

For Mitra S. K. Private Limited.

A. K. Ratz
Authorized Signatory



Mitra S. K. Private Limited

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



T: (0674) 2362916, 2360917
F: (0674) 2362918

TEST REPORT

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

Report No. : BBS/415
Date : 05.04.2023
Sample No. : MSKGL/FD/2022-23/03/00702
Date of sampling : 20.03.2023
Sampling Description : Ground Water
Sampling Location : Dosinga
Sampling Done By : Mr. Kunja Bihari Nayak

BACTERIOLOGICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

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

CHEMICAL ANALYSIS RESULT AS PER IS: 10500 – 2012

Sl. No.	Test Parameter	Units	Requirement (Acceptable Limit)	Permissible limit in the absence of alternate Source	Test Method / Specification	Result
1.	pH (at 26° C)	----	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rfim: 2012	7.18
2.	Sulphate (as SO ₄)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rfim: 2014	38.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rfim: 2014	47.0
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 Rfim: 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 Rfim: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rfim: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rfim:2012	BDL(DL:1.0)
13.	Odour	----	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rfim:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rfim: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rfim:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rfim: 2014	0.36
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rfim: 2014	120.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rfim:2012	465.0
19.	Alkalinity (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rfim: 2009	169.0
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 Rfim: 2014	20.0
22.	Total Hardness (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 21)-2013	172.0
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 Rfim: 2014	2.94
26.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rfim: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	----	----	IS 3025 (Part 14)- 2013	42.0

Ref. No. BBS/326

Date- 05.04.2023

32.	Sulphide (as H ₂ S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; R/fm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; R/fm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; R/fm: 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 R/fm: 2014	BDL(DL:0.01)
37.	Anionic Detergenis (as MBAS)	mg/l	0.2	L0	IS 13428(Annex K)- 2005	BDL(DL:0.05)
38.	Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	0.0001	No Relaxation	APHA (23 rd Edn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

P. Kamra
Report Prepared by:

For Mitra S. K. Private Limited.

A. K. Rath
Authorized Signatory



Mitra S. K. Private Limited

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



T : (0674) 2362918, 2360917
F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/412
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/00601
Sample Description : Surface Water
Sampling Location : Raw Water Reservoir
Date of Sampling : 04.03.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Standard as per Seb. 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	7.01
4.	Copper as Cu	mg/l	3.0	APHA (23rd Edition) 3120B 2017 (ICP OES)	BDL(DL:0.02)
5.	Fluoride as F	mg/l	2.0	APHA (23rd Edition) 4500 - F C/D, 2017	0.45
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition, 3500 Fe B 2017	3.6
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition) 3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound as C ₆ H ₅ OH	mg/l	1.0	APHA (23rd Edition) 5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition) 4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994: Rfm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition) 3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition) 3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr ⁶⁺	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition) 3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	110.0
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 25°C)	mg/l	30.0	APHA (23rd Edition) 5210B 2017	8.7
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	26.8
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 Rfm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition, 4500P, B -D 2017	BDL(DL:0.05)
30.	Ammonia as NH ₃	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO ₃	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	0.79
32.	Bio-assay Test	----	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	----	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve
34.	Dissolved Oxygen	mg/l	-----	APHA 23rd-2012, 4500-O-C	6.0

Report Prepared by: *S. K. Sankar*



Mitra S. K. Private Limited
A. K. Patra
Authorized Signatory

H.O.: Shrachi Centre (5th Floor), 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India
T: 91 33 4014 3000 / 2265 0006 / 2265 0007, F: 91 33 2265 0008, E: info@mitrask.com, W: www.mitrask.com

Mitra S. K. Private Limited



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

T: (0674) 2382916, 2360917

F: (0674) 2382918

Name & Address of the Customer :

THE DHAMRA PORT COMPANY LIMITED.

AT : DOSINGA, PO : DHAMRA

DIST : BHADRAK, PIN : 756171 ODISHA

TEST REPORT

Report No. : BBS/411

Date : 05.04.2023

Sample No. : MSKGL/ED/2022-23/03/00600

Sample Description : Surface Water

Sampling Location : Marai River Near DPCL

Intake Point

Date of Sampling : 04.03.2023

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	7.25
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	0.38
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition, 3500 Fe B 2017	2.7
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition) 3120B 2017 (ICP OES)	BDL (DL:0.02)
8.	Phenolic Compound as C ₆ H ₅ OH	mg/l	1.0	APHA (23rd Edition) 5530C 2017 (Chloroform Extraction)	BDL (DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL (DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition) 3120B 2017	BDL (DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition) 4500 CN- F 2017	BDL (DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition) 3120B 2017	BDL (DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025 (Part 48)-1994; Rfim 2014	BDL (DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition) 3120B 2017	BDL (DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition) 3120B 2017 (ICP OES)	BDL (DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition) 3111 D 2017 (AAS Flame)	BDL (DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL (DL:0.02)
18.	Hexavalent Chromium as Cr ⁶⁺	mg/l	0.1	APHA 22nd Edition, 3500 Cr-B	BDL (DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition) 3120B 2017 (ICP OES)	BDL (DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	97.0
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 25°C)	mg/l	30.0	APHA (23rd Edition) 5210B 2017	10.6
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	32.7
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:0.3)
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 Rfim: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	1.1
32.	Bio-assay Test	----	90% survival of fish after 96 hrs in 100% effluent	IS 6582 (Part 2) 2001, Ed. 2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	----	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve
34.	Dissolved Oxygen	mg/l	-----	APHA 23rd-2012, 4500-O-C	6.3

Report Prepared by: *(Signature)*

Mitra S. K. Private Limited

(Signature)
Authorized Signatory

H.O.: Sirachi Centre (5th Floor) 74B, Acharya Jagadish Chandra Bose Road, Kolkata - 700 016, West Bengal, India

T: 91 33 4014 3000 / 2265 0008 / 2265 0007, F: 91 33 2265 0008, E: info@mitrask.com, W: www.mitrask.com

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/2022-23/00500
Type of Sample	Marine Water
Sampling Location	Dhamra River Mouth
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
Sampling Done by	Mr. Kunju Bihari Nayak

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23 rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U.	APHA (23 rd Edition) 2130B	52.0	40.0
5	pH	---	APHA (23 rd Edition) 4500-H-B	7.39	6.74
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	17831.0	19008.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B,2017	6574.0	5874.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	122.0	95.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	11801.0	10217.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	1324.0	1089.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	309.0	238.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	1397.0	1148.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	6944.0	5997.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-O-C/G	6.4	6.1
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition) 4500-SO ₄ -E	990.0	687.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition) 4500-NO ₂ B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition) 4500-NO ₃ -E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition) 4500-NH ₃ F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₁₂ H ₁₀ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994/Rifm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994/Rifm:2014	<0.5	<0.5

Prepared By -

A. Yang

Checked By -

A.K. Rao



Date: 05.04.2023

T: (0674) 2362916, 2360917

F: (0674) 2362916

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/EM/2022-23/00500
Type of Sample	Marine Water
Sampling Location	Dry Bulk Cargo Berth Face
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23 rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	79.0	64.0
5	pH	---	APHA (23 rd Edition) 4500-16-B	7.55	6.98
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	17122.0	12333.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B,2017	12510.0	10470.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	142.0	110.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	11449.0	9081.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	1533.0	1297.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	345.0	280.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	1365.0	1105.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	5887.0	2954.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition) 4500-O-C/G	6.5	5.8
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition) 4500-SO4-E	650.0	497.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition) 4500-NO2B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition) 4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition) 4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5330C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994:RfIm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994:RfIm:2014	<0.5	<0.5

Prepared By - *S. K. Nayak*Checked By - *A. K. Rath*

MARINE WATER QUALITY REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4892017684
Reference No.	MSKGL/ED/2022-23/00500
Type of Sample	Marine Water
Sampling Location	Liquid/Gas/Cryogenic Berth Face
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23 rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	155.0	108.0
5	pH	---	APHA (23 rd Edition) 4500-H-B	7.69	6.77
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	16114.0	12529.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B.2017	8977.0	7144.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	162.0	99.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	12100.0	9855.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	2245.0	1379.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	580.0	457.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	1475.0	1176.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	7714.0	5845.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-D-C/G	6.6	5.7
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B.2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B.2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B.2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition) 4500-SO4-E	697	524.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition) 4500-NO2B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition) 4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition) 4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	5.2	2.6
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁶⁺)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994:Rflim:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994:Rflim:2014	<0.5	<0.5

Prepared By - *S. P. Singh*

Checked By - *A. K. Rath*



Mitra S. K. Private Limited

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



Date: 05.04.2023

T: (0674) 2362916, 2360917

F: (0674) 2362918

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/2022-23/00200
Type of Sample	Marine Water
Sampling Location	Along Channel at 1Km
Date of Sampling	16.03.2023
Date of Analysis	16.03.2022 to 04.04.2023
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23 rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	87.0	67.0
5	pH	---	APHA (23 rd Edition) 4500-11-B	7.89	7.07
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	28009.0	22541.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520E, 2017	17771.0	14200.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	149.0	110.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	24668.0	21327.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	3541.0	3340.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	541.0	366.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	3926.0	3484.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	14911.0	12523.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-O-C/O	6.6	6.1
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B, 2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B, 2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B, 2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition) 4500-SO4-E	1297.0	1004.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition) 4500-NO2B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition) 4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₄ -N)	mg/l	APHA (23 rd Edition) 4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁺)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994/Riffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994/Riffm:2014	<0.5	<0.5

Prepared By - *S. K. Nayak*

Checked By - *A. K. Rath*



Date: 05.04.2023

T : (0674) 2362916, 2360917

F : (0674) 2362918

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/2022-23/00500
Type of Sample	Marine Water
Sampling Location	Along Channel at 5Km
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23 rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U.	APHA (23 rd Edition) 2130B	88.0	49.0
5	pH	---	APHA (23 rd Edition) 4506-H-B	7.31	6.88
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	50240.0	26600.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B,2017	23590.0	18254.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	139.0	101.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	23704.0	21412.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	4457.0	3289.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca H	714.0	647.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	3371.0	3088.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	13270.0	12427.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-O-C/G	6.2	5.6
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition)4500-SO4-E	1686.0	1322.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition)4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition)4500-NH3P	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	2.4	0.92
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁺)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rifin:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rifin:2014	<0.5	<0.5

Prepared By - *S. K. Nayak*

Checked By - *A. K. Nayak*



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/2022-23/00500
Type of Sample	Marine Water
Sampling Location	Along Channel at 10Km
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
Sampling Done by	Mr. Kunja Bihari Nayak

SL. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23 rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	104.0	60.0
5	pH	---	APHA (23 rd Edition) 4500-H-B	7.74	6.94
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	30882.0	32441.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B,2017	23208.0	19426.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	180.0	165.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	22821.0	18044.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	4542.0	4739.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	657.0	528.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	3755.0	38420.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	166.0	133.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-O-C/G	6.2	5.7
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition)4500-SO4-E	1347.0	1187.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition)4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁶⁺)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 4B)-1994;Rifim:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rifim:2014	<0.5	<0.5

Prepared By - *S. Kango*Checked By - *A.K. Rath*

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/2022-23/00500
Type of Sample	Marine Water
Sampling Location	Near Kanika Island
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Plazm	APHA (23 rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	174.0	165.0
5	pH	---	APHA (23 rd Edition) 4500-14-B	8.28	7.66
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	31645.0	27476.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B.2017	20887.0	19055.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	218.0	178.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	30017.0	26287.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	3588.0	3350.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	847.0	687.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	2600.0	2339.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	14750.0	13986.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-O-C/G	6.4	6.0
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition)4500-SO4-E	1382.0	1173.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition)4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₄ -N)	mg/l	APHA (23 rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁶⁺)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;R/fin:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;R/fin:2014	<0.5	<0.5

Prepared By - *S. K. Ganguly*Checked By - *A. K. Patil*

PHYTOPLANKTON MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00500
Type of Sample	Marine Sample (Phytoplankton)
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 Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
Sampling Done by	Mr. Kunja Bihari Nayak

Name of the Parameters	Total count	No of species	Chlorophyll-a	Major Species	
Unit	Units/L	Nos.	mg/l	---	
Testing Method	APHA 10200	APHA 10200	APHA 10200H	APHA (23 rd Edition) 10200	
Analysis Result					
S-1	Surface Water	22000	6	0.66	Navicula, Moueotia
	Bottom water	19000	8	0.54	Enteromorpha, Nereocystis
S-2	Surface Water	27000	9	0.80	Moueotia, Enteromorpha
	Bottom water	14000	3	0.61	Vallisneria,, Phormidium
S-3	Surface Water	22000	4	0.75	Cyclotella, Moueotia
	Bottom water	17000	7	0.66	Vallisneria, Moueotia
S-4	Surface Water	18000	8	0.92	Navicula, Fragilaria
	Bottom water	25000	7	0.70	Nereocystis, Zostera
S-5	Surface Water	21000	6	0.90	Moueotia, Phormidium
	Bottom water	15000	4	0.57	Enteromorpha, Navicula
S-6	Surface Water	10000	9	0.74	Phormidium, Calothrix
	Bottom water	26000	2	0.37	Phormidium a, Enteromorpha
S-7	Surface Water	12000	8	0.69	Cyclotella, Moueotia
	Bottom water	23000	6	0.47	Phormidium, Calothrix

Prepared By - *S. K. Kamra*

Checked By - *A. K. Rath*



ZOOPLANKTON MONITORING REPORT

T : (0674) 2362916, 2360917

F : (0674) 2360917

Client Name & Address	M/s The Dhamra Port Company Limited, Dosings, Bhadrak, Odisha		
Work Order No.	4802017684		
Reference No.	MSKGI/ED/2022-23/00500		
Type of Sample	Marine Sample (Zooplankton)		
Sampling Location	S1:Dhamra River Mouth S2:Dry Bulk Cargo Berth Face S5:Along Chanel at 5Km S7:Near Kanika Island	S3:Liquid/Gas/Cryogenic Berth Face S4:Along Channel at 1Km S6: Along Channel at 10Km	
Date of Sampling	16.03.2023		
Date of Analysis	16.03.2023 to 04.04.2023		
Sampling Done by	Mr. Kunja Bihari Nayak		

Name of the Parameters	Total count	No of species	Major Species
Unit	Units/L	Nos.	---
Testing Method	APHA 10200	APHA 10200	APHA (23 rd Edition) 10200
Analysis Result			
S-1	Surface Water	None	None
	Bottom water	None	None
S-2	Surface Water	None	None
	Bottom water	1800	6 Daphnia
S-3	Surface Water	None	None
	Bottom water	2200	4 Daphnia
S-4	Surface Water	None	None
	Bottom water	None	None
S-5	Surface Water	None	None
	Bottom water	None	None
S-6	Surface Water	None	None
	Bottom water	None	None
S-7	Surface Water	None	None
	Bottom water	None	None

Prepared By - *S. K. Ganguly*

Checked By- *A. K. Rath*



MICROBIOLOGICAL MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00500
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 Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
Sampling Done by	Mr. Kunja Bibari Nayak

Name of the Parameters	Total Bacteria count	Total Coliform	Faecal Coliform	E. coli	Enterococcus	Salmonella	Shigella	Vibrio	
Unit	CFU/ml	MPN/100ml	MPN/100ml	MPN/100ml	CFU/ml	/100ml	/100ml	/100ml	
Testing Method	APHA 5 th Edn	APHA 9221 B	APHA 9221 E	APHA 9221 F	IS 5887(Part-II)	IS 5887(Part-III)	IS 5887(Part-VI)	IS 5887(Part-V)	
Analysis Result									
S-1	Surface Water	66.0	<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-2	Surface Water	120.0	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-3	Surface Water	155.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	144.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-4	Surface Water	118.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	88.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-5	Surface Water	50.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	40.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-6	Surface Water	100.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	78.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-7	Surface Water	196.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	44.0	5.2	<1.8	<1.8	<1.0	Absent	Absent	Absent

Prepared By - *S. K. Nayak*



Checked By - *A. K. Patra*

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

T: (0674) 2362916, 2360917
F: (0674) 2362918

Date: 05.04.2023

PRIMARY PRODUCTIVITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2021-23/00590
Type of Sample	Marine Sample (Productivity)
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
Sampling Done by	Mr. Kunja Bihari Nayak

Sl No.	Monitoring Location		Gross Primary productivity (O ₂ mg/L/day)	Net Primary productivity (O ₂ mg/L/day)
1	S1:Dhamra River Mouth	Surface Water	1.4	0.2
		Bottom water	2.8	1.6
2	S2:Dry Bulk Cargo Berth Face	Surface Water	2.2	1.0
		Bottom water	1.2	0.1
3	S3:Liquid/Gas/Cryogenic Berth Face	Surface Water	2.6	1.7
		Bottom water	1.4	0.6
4	S4:Along Channel at 1Km	Surface Water	2.7	1.5
		Bottom water	1.1	0.4
5	S5:Along Chanel at 5Km	Surface Water	2.6	1.9
		Bottom water	1.6	0.5
6	S6: Along Channel at 10Km	Surface Water	2.0	1.3
		Bottom water	1.6	0.5
7	S7:Near Kanika Island	Surface Water	2.8	1.0
		Bottom water	1.8	0.1

Prepared By - *P. K. Ganguly*

Checked By - *A. K. Ray*



PHYTO BENTHOS MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Doslaga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2023-23/00500
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 Chanel at 5Km S6: Along Channel at 10Km S7:Near Kaniha Island
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
Sampling Done by	Mr. Soumya Ranjan Ghudai

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 10300 B	By Calculation (Shannon's Index)	APHA 10500 B	
Analysis Result						
S-1	Surface Water	1444	166	5	0.3564	Copepods
	Bottom water	2178	200	4	1.9004	N.longisigma
S-2	Surface Water	2089	234	8	1.7574	Ctenophora,
	Bottom water	1970	178	10	1.6515	Ditylum
S-3	Surface Water	1380	134	14	0.9809	Ctenophora, Ditylum,
	Bottom water	1684	145	12	0.5815	Podasira
S-4	Surface Water	2003	247	14	0.8842	Ditylum, N.longisigma
	Bottom water	1877	166	9	0.7292	Ditylum, Echinodermata
S-5	Surface Water	1447	202	8	1.5262	Podasira, Copepods
	Bottom water	2090	214	16	1.8613	Ditylum, Echinodermata
S-6	Surface Water	2725	352	28	2.6301	Podasira, Copepods
	Bottom water	1975	138	6	0.8722	Ctenophora, Podasira
S-7	Surface Water	1770	110	11	0.6859	Ditylum, Podasira
	Bottom water	1500	144	18	1.9708	Podasira N.longisigma

Prepared By - *P. K. Singh*Checked By - *H. K. Rout*

T : (0674) 2362916, 2360917

F : (0674) 2362918

Date: 05.04.2023

TOTAL FAUNA MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00500
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 Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	16.03.2023
Date of Analysis	16.03.2023 to 04.04.2023
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 m ³
Testing Method	APIHA 10700	APIHA 10700	APIHA 10700	APIHA 10700
Analysis Result				
S-1	Surface Water	Annelida, Mollusca Plychaeta-60,Bivalvia-38	56	156
	Bottom water	Annelida, Mollusca Plychaeta-50,Bivalvia-18	29	126
S-2	Surface Water	Annelida, Mollusca Plychaeta-54,Bivalvia-09	40	140
	Bottom water	Annelida, Mollusca Plychaeta-65,Bivalvia-20	87	252
S-3	Surface Water	Anthropoda, Annelida Plychaeta-90,Bivalvia-39	142	280
	Bottom water	Annelida, Mollusca Plychaeta-27,Bivalvia-25	76	220
S-4	Surface Water	Annelida, Mollusca Plychaeta-40,Bivalvia-36	180	396
	Bottom water	Annelida, Mollusca Plychaeta-32,Bivalvia-07	66	147
S-5	Surface Water	Annelida, Mollusca Plychaeta-39,Bivalvia-16	171	366
	Bottom water	Annelida, Mollusca Plychaeta-92,Bivalvia-27	133	252
S-6	Surface Water	Anthropoda, Annelida Malacostraca-44,Pelecypoda-29	147	350
	Bottom water	Annelida, Mollusca Plychaeta-96,Gastropoda-51	160	489
S-7	Surface Water	Anthropoda, Annelida Malacostraca-25,Pelecypoda-11	70	168
	Bottom water	Anthropoda, Annelida Plychaeta-34,Gastropoda-15	67	397

Prepared By - *S. K. Ganguly*Checked By - *A. K. Raha*

TEST REPORT

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

Report No. : BBS/416
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/00100
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 04.03.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.55
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2347.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.89
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	137.0
5.	Moisture content	%	Lab Method	22.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	4642.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	270.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	6.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	162.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	227.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2140.0
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	33.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	22.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	147.0

Continuation Sheet



Ref. No. BBS/416

Date- 05.04.2023

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	11.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); R/Im:2014	427.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	498.0
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	28.0
28.	Clay	None	TPM/MSK/P&E/1/36A	34.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1514
2.	Total count (Phytobenthos)	50 mg wet sediment	260
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	---	1.95
5.	Major Species (phytobenthos)	---	<i>Coscinodiscus sp., Biddulphia mobilensis</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-47, Bivalvia-28
8.	Total no. of species encountered (Fauna)	Nos.	18
9.	Total fauna (Fauna)	per m ³	149

Report Prepared by:



For Mitra S.K. Private Limited

Authorized Signatory

TEST REPORT

T : (0674) 2382916, 2380917
F : (0674) 2382918

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

Report No. : BBS/417
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/00101
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 04.03.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.66
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2741.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.66
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	130.0
5.	Moisture content	%	Lab Method	14.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	4752.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	1669.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	12.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	214.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	498.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	3870.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	172.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	14.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	36.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	18.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	274.0

Ref. No. BBS/417

Date- 05.04.2023

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	1845.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	9.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffin:2014	350.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	288.0
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	27.0
28.	Clay	None	TPM/MSK/P&E/1/36A	33.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1680
2.	Total count (Phytobenthos)	50 mg wet sediment	349
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	---	1.88
5.	Major Species (phytobenthos)	---	<i>Coscinodiscus</i> sp
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-31,Bivalvia-20
8.	Total no. of species encountered (Fauna)	Nos.	16
9.	Total fauna (Fauna)	per m ²	137

S. Kanungo
Report Prepared by:



For Mitra S.K. Private Limited

A.K. Dahiya
Authorized Signatory

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

T : (0674) 2362916, 2360917
 F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/418
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/00102
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 16.03.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rflm:2011	7.96
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rflm:2006	3270.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rflm:2015	0.28
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	50.0
5.	Moisture content	%	Lab Method	26.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1677.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	173.0
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	22.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	26.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1238.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	182.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	29.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	27.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	22.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	155.0

Ref. No. BBS/418

Date- 05.04.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	11.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	2217.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	7.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); R/fm:2014	302.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	228.0
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	29.0
27.	Silt	%	TPM/MSK/P&E/1/36A	22.0
28.	Clay	None	TPM/MSK/P&E/1/36A	49.0
29.	Texture	%	TPM/MSK/P&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	247
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	---	1.44
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Spirulina aeruginosa</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-58, Bivalvia-24
8.	Total no. of species encountered (Fauna)	Nos.	21
9.	Total fauna (Fauna)	per m ²	230

S. Kumar
Report Prepared by:



For Mitra S.K. Private Limited

A.K. Rathi
Authorized Signatory

T: (0674) 2362916, 2360917

F: (0674) 2362918

TEST REPORT

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

Report No. : BBS/419
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/00103
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 16.03.2023

ANALYSIS RESULT

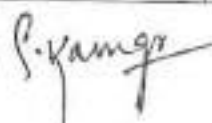
<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.41
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3155.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.68
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	42.0
5.	Moisture content	%	Lab Method	19.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	3567.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	105.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	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	11.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1317.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	176.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	12.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	13.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	21.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	131.0

18.	Lead (as Pb)	mg/kg	EPA 6010D	16.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1580.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	30.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	204.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	218.0
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.	Clay	None	TPM/MSK/P&E/1/36A	20.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay

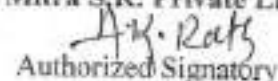
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1278
2.	Total count (Phytobenthos)	50 mg wet sediment	310
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	---	2.80
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Nizschia distans</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-94, Bivalvia-48
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m ³	150

Report Prepared by:




For Mitra S.K. Private Limited



Authorized Signatory

TEST REPORT

T: (0674) 2362916, 2360917

F: 9599226222 Address of the Customer :

THE DHAMRA PORT COMPANY LIMITED

AT: DOSINGA, PO: DHAMRA

DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/420

Date : 05.04.2023

Sample No. : MSKGL/ED/2022-23/03/00104

Sample Description : Sea Sediment

Sampling Location : Dhamra River Mouth

Date of sampling : 16.03.2023

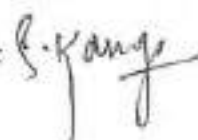
ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.21
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	7515.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	2.6
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	32.0
5.	Moisture content	%	Lab Method	14.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1448.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	351.0
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	2.9
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	5.1
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2155.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	370.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	5.6
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.8
16.	Zinc (as Zn)	mg/kg	EPA 6010D	8.9
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

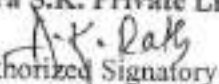
18.	Lead (as Pb)	mg/kg	EPA 6010D	7.8
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	8.1
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	3.7
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflin:2014	9.6
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	12.6
24.	Total Petroleum 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	37.0
27.	Silt	%	TPM/MSK/P&E/1/36A	23.0
28.	Clay	None	TPM/MSK/P&E/1/36A	40.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1600
2.	Total count (Phytobenthos)	50 mg wet sediment	190
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	0.8541
5.	Major Species (phytobenthos)	----	<i>Coscinodiscuss, Pleurosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-44, Bivalvia-14
8.	Total no. of species encountered (Fauna)	Nos.	22
9.	Total fauna (Fauna)	per m ³	160

Report Prepared by: 

For Mitra S.K. Private Limited


 Authorized Signatory


TEST REPORT

T : (0674) 2362918, 2360917

F : (0874) 2362918

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

Report No. : BBS/421
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/00105
Sample Description : Sea Sediment
Sampling Location : Dry Bulk Cargo Berth Face
Date of sampling : 16.03.2023

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.44
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2587.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.2
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	16.0
5.	Moisture content	%	Lab Method	30.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2249.0
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	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	7.8
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2257.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	302.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	2.7
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.5
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.8
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

Ref. No. BBS/421



18.	Lead (as Pb)	mg/kg	EPA 6010D	3.8
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	2.1
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfm:2014	12.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	8.9
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	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.	1945
2.	Total count (Phytobenthos)	50 mg wet sediment	290
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	---	0.7045
5.	Major Species (phytobenthos)	---	<i>Navicula, Coscinodiscus,</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-30, Bivalvia-15
8.	Total no. of species encountered (Fauna)	Nos.	24
9.	Total fauna (Fauna)	per m ³	216

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory


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

TEST REPORT

T : (0674) 2362916, 2360917
F : (0674) 2362918

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

Report No. : BBS/422
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/00106
Sample Description : Sea Sediment
Sampling Location : Liquid/Gas/Cryogenic Berth Face
Date of sampling : 16.03.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffin:2011	7.62
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffin:2006	3282.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffin:2015	3.4
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	41.0
5.	Moisture content	%	Lab Method	23.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1518.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	665.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	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	7.6
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1674.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	218.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	3.9
15.	Nickel (as Ni)	mg/kg	EPA 6010D	4.6
16.	Zinc (as Zn)	mg/kg	EPA 6010D	9.2
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/422

Date- 05.04.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	7.6
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	2.4
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffin:2014	8.2
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	2.9
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	30.0
28.	Clay	None	TPM/MSK/P&E/1/36A	34.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1780
2.	Total count (Phytobenthos)	50 mg wet sediment	242
3.	No of species (Phytobenthos)	Nos.	3
4.	Diversity index (Phytobenthos)	----	0.2950
5.	Major Species (phytobenthos)	----	<i>Bidulphia, Pleurosigma,</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-45, Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	30
9.	Total fauna (Fauna)	per m ³	242

S. K. Rang
Report Prepared by:

For Mitra S.K. Private Limited

A. K. Patel
Authorized Signatory

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

TEST REPORT

T : (0674) 2362916, 2360917
 F : (0674) 2362918

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

Report No. : BBS/423
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/00107
Sample Description : Sea Sediment
Sampling Location : Along Channel at 1 km
Date of sampling : 16.03.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.18
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3955.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	2.4
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	20.0
5.	Moisture content	%	Lab Method	31.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1886.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	570.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	12.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	6.4
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	20.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2912.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	259.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	1.8
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.4
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.6
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/423

Date- 05.04.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	1.7
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	4.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	1.6
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	14.2
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	41.0
27.	Silt	%	TPM/MSK/P&E/1/36A	39.0
28.	Clay	None	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.	1347
2.	Total count (Phytobenthos)	50 mg wet sediment	204
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	----	0.3910
5.	Major Species (phytobenthos)	----	<i>Bidulphia, Gyrosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-75,Bivalvia-33
8.	Total no. of species encountered (Fauna)	Nos.	12
9.	Total fauna (Fauna)	per m ³	250

S. K. Singh
Report Prepared by:

For Mitra S.K. Private Limited

A. K. Raut
Authorized Signatory

TEST REPORT

T : (0674) 2362916, 2360917

F : (0674) 2362918

Name & Address of the Customer :

THE DHAMRA PORT COMPANY LIMITED

AT: DOSINGA, PO: DHAMRA

DIST : BHADRAK, PIN: 756171 ODISHA

Report No. : BBS/424

Date : 05.04.2023

Sample No. : MSKGL/ED/2022-23/03/00108

Sample Description : Sea Sediment

Sampling Location : Along Channel at 5 km

Date of sampling : 16.03.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.60
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3975.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	2.8
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	50.0
5.	Moisture content	%	Lab Method	31.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	718.0
7.	Sulphate (as SO ₄)	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 PO ₄)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.9
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	16.7
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2074.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	201.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	1.6
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.7
16.	Zinc (as Zn)	mg/kg	EPA 6010D	15.7
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

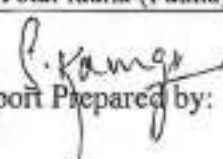
Ref. No. BBS/424

Date- 05.04.2023

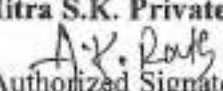
18.	Lead (as Pb)	mg/kg	EPA 6010D	2.4
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	2.4
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	3.6
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	12.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	6.4
24.	Total Petroleum 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.	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.	1870
2.	Total count (Phytobenthos)	50 mg wet sediment	266
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	---	1.4731
5.	Major Species (phytobenthos)	---	<i>Navicula, Gyrosigma</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-60, Bivalvia-30
8.	Total no. of species encountered (Fauna)	Nos.	52
9.	Total fauna (Fauna)	per m ³	170

Report Prepared by: 

For Mitra S.K. Private Limited


Authorized Signatory

TEST REPORT

T : (0674) 2362916, 2360917
F : (0674) 2362918

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

Report No. : BBS/425
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/00109
Sample Description : Sea Sediment
Sampling Location : Along Channel at 10 km
Date of sampling : 16.03.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffin:2011	7.41
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3588.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	6.6
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	34.0
5.	Moisture content	%	Lab Method	32.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1914.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	422.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	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	2374.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	1640.0
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	12.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/425

Date- 05.04.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.84
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	4.02
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	5.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	15.6
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/g dry wt.	1800
2.	Total count (Phytobenthos)	50 mg wet sediment	264
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	---	1.6429
5.	Major Species (phytobenthos)	---	<i>Synedra, Coscinodiscuss sp.,</i>
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.	40
9.	Total fauna (Fauna)	per m ³	249

S. K. Ranga
Report Prepared by:

For Mitra S.K. Private Limited
A.K. Rats
Authorized Signatory

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

TEST REPORT

T : (0674) 2362916, 2360917
F : (0674) 2362918

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

Report No. : BBS/426
Date : 05.04.2023
Sample No. : MSKGL/ED/2022-23/03/00110
Sample Description : Sea Sediment
Sampling Location : Near Kanika Island
Date of sampling : 16.03.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.86
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3950.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	4.7
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	15.0
5.	Moisture content	%	Lab Method	14.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	509.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	2687.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	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	7.6
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2578.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	211.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	4.8
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

Ref. No. BBS/426

Date- 05.04.2023

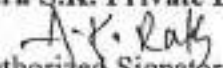
18.	Lead (as Pb)	mg/kg	EPA 6010D	2.4
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	3.9
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	6.7
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	11.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	4.7
24.	Total Petroleum 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	42.0
27.	Silt	%	TPM/MSK/P&E/1/36A	30.0
28.	Clay	None	TPM/MSK/P&E/1/36A	28.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1747
2.	Total count (Phytobenthos)	50 mg wet sediment	289
3.	No of species (Phytobenthos)	Nos.	16
4.	Diversity index (Phytobenthos)	----	1.5505
5.	Major Species (phytobenthos)	----	<i>Bidulphia, Navicula</i>
6.	Name of Phylum (Fauna)	----	Anthropoda, Annelida
7.	Class & Number of individuals encountered (Fauna)	----	Malagostraca-50, Pelecypoda-11
8.	Total no. of species encountered (Fauna)	Nos.	34
9.	Total fauna (Fauna)	per m ³	363

Report Prepared by:

For Mitra S.K. Private Limited


 Authorized, Signatory

Ref: MSKGL/ED/BHU-2022/00700

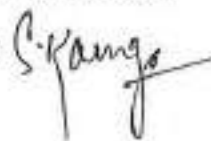
Date: 05.04.2023

Site Specific Monitored Meteorological Data**For : The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha**

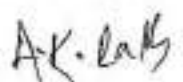
Sr. No.	Parameters	March.23	
1.	Temperature (°C)	Minimum	22.1
		Maximum	36.7
		Average	28.3
2.	Relative Humidity (%)	Minimum	11.2
		Maximum	95.0
		Average	65.7
3.	Wind Speed (m/s)	Minimum	0.0
		Maximum	11.3
		Average	2.6
4.	Wind Direction (%)	N	7.4
		NNE	4.7
		NE	8.9
		ENE	3.7
		E	11.7
		ESE	10.2
		SE	6.1
		SSE	2.1
		S	3.9
		SSW	6.7
		SW	7.4
		WSW	2.5
		W	5.6
		WNW	4.8
	CALM	14.52	
5.	Rainfall (mm)	Total	80.2
		Minimum Day Wise	0.0
		Maximum Day Wise	31.0
		Average	0.11
6.	Ambient Pressure (mm Hg)	Minimum	746.8
		Maximum	758.7
		Average	752.0

(Source - Site Specific Data)

Prepared By



Verified By



MONTHLY ENVIRONMENT MONITORING REPORT

FEBRUARY- 2023

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



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

Mitra S. K. Private Limited

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



T: (0674) 2382918, 2380917
F: (0674) 2382919

TEST REPORT

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

Report No. : BBS/507
Date : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/01331
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 04.02.2023

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	---	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition)	---	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23 rd Edition)	6.0 - 8.5	6.84	7.27
4.	Appearance	---	--	Lab Method	---	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	70.0	12.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	98.0	8.4
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	---	239.0	30.8
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	8.9	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	---	28.2	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	---	36.4	1.9
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	---	2170.0	198.0

S. K. Saha
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

Mitra S. K. Private Limited

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



T : (0674) 2362916, 2360917

F : (0674) 2362918

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 : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/01339
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 18.02.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	----	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition)	----	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition)	6.0 - 8.5	6.96	7.55
4.	Appearance	----	--	Lab Method	----	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	166.0	10.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	85.0	5.8
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	----	210.0	24.6
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	7.1	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	----	33.8	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	----	48.1	0.65
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	----	2600.0	90.0

C. Kango
Report Prepared by:



For Mitra S. K. Private Limited

A.K. Rath
Authorized Signatory

TEST REPORT

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

Report No. : BBS/502
Date : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/01329
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 04.02.2023

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	---	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition)	---	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23 rd Edition)	6.0 – 8.5	6.69	7.44
4.	Appearance	---	--	Lab Method	---	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	114.0	12.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	139.0	5.0
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	---	228.0	14.3
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	14.6	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	---	23.2	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	---	35.8	2.6
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	---	2300.0	130.0

S. K. Singh
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Dasg
Authorized Signatory

Mitra S. K. Private Limited

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U51905WB1956PTC023037]



T: (0674) 2362916, 2360917
F: (0674) 2362918

TEST REPORT

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

Report No. : BBS/504
Date : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/01337
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 18.02.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	---	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition)	---	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23 rd Edition)	6.0 - 8.5	6.62	6.98
4.	Appearance	---	--	Lab Method	---	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	192.0	8.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	140.0	4.0
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	---	362.0	12.2
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	13.7	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	---	25.2	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	---	37.4	2.1
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	---	1700.0	139.0

S. K. Kango
Report prepared by:



For Mitra S. K. Private Limited

A. K. Saha
Authorized Signatory

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 : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/01327
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 04.02.2023

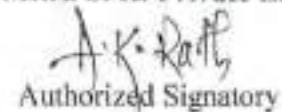
ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	----	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition)	----	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition)	6.0 - 8.5	6.66	7.21
4.	Appearance	----	--	Lab Method	----	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	90.0	6.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	145.0	8.3
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	----	372.0	20.4
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	15.2	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	----	19.6	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	----	29.2	2.6
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	----	1800.0	89.0


Report Prepared by:



For Mitra S. K. Private Limited


Authorized Signatory

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 : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/01335
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 18.02.2023

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	---	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition)	---	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23 rd Edition)	6.0 - 8.5	6.52	7.04
4.	Appearance	---	--	Lab Method	---	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	70.0	8.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	113.0	4.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	---	242.0	12.7
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	6.7	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	---	21.2	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	---	32.6	0.45
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	---	1800.0	78.0

S. K. Gangi
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rasth
Authorized Signatory

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 : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/01333
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 18.02.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	---	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition)	---	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23 rd Edition)	6.0 - 8.5	6.21	6.77
4.	Appearance	---	--	Lab Method	---	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	85.0	9.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	95.0	5.4
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	---	234.0	20.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	7.3	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	---	24.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	---	31.0	2.8
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	---	1300.0	132.0

S. K. Singh
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

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 : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/01325
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 04.02.2023

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Design parameter for Raw Sewage	Result	
						Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition)	----	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition)	----	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition)	6.0 – 8.5	6.75	7.28
4.	Appearance	----	--	Lab Method	----	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition)	1000	120.0	6.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition)	300 - 350	152.0	7.1
7.	COD	mg/l	<50.0	APHA (23 rd Edition)	----	378.0	22.4
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition)	100	10.4	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition)	----	21.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999)	----	31.0	1.4
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition)	----	1950.0	130.0

P. K. Singh
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

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

T : (0674) 2362916, 2380917

F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/515
Date : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/00900
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 04.02.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
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	2400.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.98
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	235.0
5.	Moisture content	%	Lab Method	16.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2214.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	440.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	11.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	223.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	269.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1017.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	397.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	12.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	10.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	8.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	213.0

Ref. No. BBS/515

Date- 04.03.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	7.4
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1374.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	18.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); RfIm:2014	334.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	309.0
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	36.0
27.	Silt	%	TPM/MSK/P&E/1/36A	28.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	36.0

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1315
2.	Total count (Phytobenthos)	50 mg wet sediment	280
3.	No of species (Phytobenthos)	Nos.	12
4.	Diversity index (Phytobenthos)	----	1.79
5.	Major Species (phytobenthos)	----	<i>Biddulphia mobilensis, Navicula closterium</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-54, Bivalvia-28
8.	Total no. of species encountered (Fauna)	Nos.	14
9.	Total fauna (Fauna)	per m ²	187

Report Prepared by:



For Mitra S.K. Private Limited

Authorized Signatory

TEST REPORT

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

Report No. : BBS/516
Date : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/00901
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 04.02.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.69
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3245.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.98
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	252.0
5.	Moisture content	%	Lab Method	28.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2367.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	510.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	151.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	45.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2374.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	340.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	10.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	8.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	12.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	342.0

Ref. No. BBS/516

Date- 04.03.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	7.5
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	3541.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	24.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	425.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	363.0
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.	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.	1640
2.	Total count (Phytobenthos)	50 mg wet sediment	270
3.	No of species (Phytobenthos)	Nos.	9
4.	Diversity index (Phytobenthos)	---	1.72
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Nitzschia distans</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-40,Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	16
9.	Total fauna (Fauna)	per m ³	190

S. Kango
Report Prepared by:



For Mitra S.K. Private Limited
A.K. Rath
Authorized Signatory

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 : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/00902
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 19.02.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	6.88
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2241.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.76
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	248.0
5.	Moisture content	%	Lab Method	22.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2250.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	465.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	11.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	80.0
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	2081.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	425.0
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	301.0

Ref. No. BBS/517

Date- 04.03.2023

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	3408.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	30.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	421.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	486.0
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	30.0
27.	Silt	%	TPM/MSK/P&E/1/36A	42.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	28.0

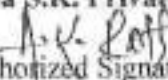
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1590
2.	Total count (Phytobenthos)	50 mg wet sediment	266
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	---	1.55
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Spirulina aeruginea</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-50,Bivalvia-20
8.	Total no. of species encountered (Fauna)	Nos.	22
9.	Total fauna (Fauna)	per m ³	230

Report Prepared by:




For Mitra S.K. Private Limited


 Authorized Signatory

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 : 04.03.2023
Sample No. : MSKGL/ED/2022-23/02/00903
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 19.02.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
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	2550.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	7.8
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	247.0
5.	Moisture content	%	Lab Method	20.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2080.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	405.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	129.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	218.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1174.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	166.0
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	28.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	152.0

Ref. No. BBS/518

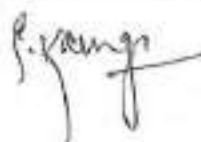
Date- 04.03.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	14.7
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1487.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	12.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rf/in:2014	157.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	160.0
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	32.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	29.0

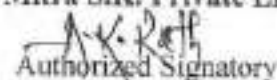
Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1741
2.	Total count (Phytobenthos)	50 mg wet sediment	290
3.	No of species (Phytobenthos)	Nos.	16
4.	Diversity index (Phytobenthos)	---	1.79
5.	Major Species (phytobenthos)	---	<i>Gyrosigma</i> sp., <i>Nitzschia distans</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-82, Bivalvia-31
8.	Total no. of species encountered (Fauna)	Nos.	14
9.	Total fauna (Fauna)	per m ³	192

Report Prepared by:



For Mitra S.K. Private Limited


 Authorized Signatory


Ref: MSKGL/ED/BHU-2022/01200

Date: 09.03.2023

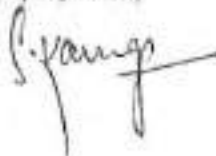
Site Specific Monitored Meteorological Data

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

Sr. No.	Parameters	February.23	
1.	Temperature (°C)	Minimum	16.9
		Maximum	33.4
		Average	23.5
2.	Relative Humidity (%)	Minimum	26.4
		Maximum	98.5
		Average	67.8
3.	Wind Speed (m/s)	Minimum	0.0
		Maximum	10.5
		Average	2.9
4.	Wind Direction (%)	N	10.9
		NNE	6.8
		NE	3.87
		ENE	12.4
		E	2.9
		ESE	17.2
		SE	4.46
		SSE	4.31
		S	9.6
		SSW	1.87
		SW	5.4
		WSW	1.89
		W	14.7
		WNW	1.47
5.	Rainfall (mm)	CALM	2.23
		Total	0.0
		Minimum Day Wise	0.0
		Maximum Day Wise	0.0
6.	Ambient Pressure (mm Hg)	Average	0.0
		Minimum	747.8
		Maximum	758.6
		Average	751.8

(Source - Site Specific Data)

Prepared By



Verified By




MONTHLY ENVIRONMENT MONITORING REPORT

JANUARY- 2023

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



TESTING • INSPECTION

Shrachi Centre (5th Floor)

74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700016 (West Bengal)

H-5/100, Ground Floor
 IRC Village, Nayapalli
 Bhubaneswar - 751015
 CIN : U51909WB1956PTC023037

T : (0674) 2362918 / 2380917
 F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/507
 Date : 04.02.2023
 Sample No. : MSKGL/ED/2022-23/11/01107
 Sample Description : EFFLUENT WATER
 Sampling Location : STP 150KLD
 Date of sampling : 07.01.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.90	7.33
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	50.0	10.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	95.0	6.9
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	232.0	21.7
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	9.4	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	24.6	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	33.1	1.8
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2500.0	170.0

S. K. Kamra
 Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
 Authorized Signatory

N-5/100, Ground Floor
 IRC Village, Nayapalli
 Bhubaneswar - 751015
 CN : U51909WB1956PTC029037

T : (0674) 2362916 / 2360917
 F : (0674) 2362916

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 : 04.02.2023
 Sample No. : MSKGL/ED/2022-23/01/01222
 Sample Description : EFFLUENT WATER
 Sampling Location : STP 150KLD
 Date of sampling : 21.01.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.78	7.84
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	196.0	12.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	80.0	3.8
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	188.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	6.7	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	30.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffin:2014	42.0	0.47
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2300.0	120.0

S. K. Kamra
 Report Prepared by:



For Mitra S. K. Private Limited

Y. K. Rath
 Authorized Signatory

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

T : (0674) 2362916, 2360917
F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/502
Date : 04.02.2023
Sample No. : MSKGL/ED/2022-23/01/01102
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 07.01.2023

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.65	7.28
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	80.0	8.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	110.0	6.8
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	246.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	13.1	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	19.8	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfm:2014	26.1	2.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2290.0	160.0

P. K. Singh
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

TEST REPORT

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

Report No. : BBS/504
Date : 04.02.2023
Sample No. : MSKGL/ED/2022-23/01/01220
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 21.01.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.59	7.16
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	289.0	17.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	138.0	8.0
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	358.0	22.8
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	12.6	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	26.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfm:2014	39.0	3.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1900.0	120.0

S. Kamr
Report Prepared by:



For Mitra S. K. Private Limited

A. W. Rathi
Authorized Signatory

N-5/100, Ground Floor
 IRC Village, Nayapalli
 Bhubaneswar - 751015
 CIN : U51909WB1856PTC023037

T : (0674) 2362916 / 2360017
 F : (0674) 2362918

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 : 04.02.2023
 Sample No. : MSKGL/ED/2022-23/01/01101
 Sample Description : EFFLUENT WATER
 Sampling Location : STP 15 KLD
 Date of sampling : 07.01.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.75	7.28
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	120.0	6.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	152.0	7.1
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	378.0	21.4
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	10.4	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	21.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	31.0	3.4
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1950.0	190.0

S. K. Kamra
 Report prepared by:



For Mitra S. K. Private Limited

A. K. Rout
 Authorized Signatory

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U51909WB1966PTC023037]

T : (0674) 2362916, 2360917
F : (0674) 2362919

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 : 04.02.2023
Sample No. : MSKGL/ED/2022-23/01/01216
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 21.01.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.21	6.77
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	85.0	13.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	95.0	5.4
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	234.0	20.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	7.3	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	24.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfin:2014	31.0	2.8
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1300.0	160.0

S. Kango
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Pathy
Authorized Signatory

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

T : (0674) 2362916 / 2360917
 F : (0674) 2362918

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 : 04.02.2023
 Sample No. : MSKGL/ED/2022-23/01/01113
 Sample Description : EFFLUENT WATER
 Sampling Location : STP 25KLD
 Date of sampling : 07.01.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.75	7.45
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	110.0	4.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	130.0	10.7
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	360.0	38.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	14.7	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	16.8	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	32.1	2.8
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2000.0	98.0

S. Kanyo
 Report Prepared by:



For Mitra S. K. Private Limited

A. K. Roith
 Authorized Signatory

H-5/100, Ground Floor
 IRC Village, Nayapalli
 Bhubaneswar - 751015
 CIN : U51909WB1958PTC023037

T : (0674) 2362916 / 2360917
 F : (0674) 2362918

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 : 04.02.2023

Sample No. : MSKGL/ED/2022-23/01/01218

Sample Description : EFFLUENT WATER

Sampling Location : STP 25KLD

Date of sampling : 21.01.2023

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.47	7.23
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	124.0	8.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	104.0	4.0
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	256.0	15.8
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	8.5	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH ₃ -F 2017	23.8	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfm:2014	36.1	0.87
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2200.0	110.0

S. K. Singh
 Report Prepared by:



For Mitra S. K. Private Limited

V. K. Singh
 Authorized Signatory

N-5/100, Ground Floor
 IRC Village, Nayapalli
 Bhubaneswar - 751015
 CIN : U51909WB1956PT0023037

T : (0674) 2362916 / 2380917
 F : (0674) 2362916

TEST REPORT

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

Report No. : BBS/515
Date : 04.02.2023
Sample No. : MSKGL/ED/2022-23/01/00615
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 07.01.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.66
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2312.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.87
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	246.0
5.	Moisture content	%	Lab Method	14.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2142.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	457.0
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	252.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	298.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1178.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	412.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	16.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	12.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	10.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	229.0

Ref. No. BBS/515

Date- 04.02.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	6.1
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1288.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	16.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Riffm:2014	321.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	302.0
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	29.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	23.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1400
2.	Total count (Phytobenthos)	50 mg wet sediment	294
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	---	1.94
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Navicula closterium</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-58, Bivalvia-32
8.	Total no. of species encountered (Fauna)	Nos.	16
9.	Total fauna (Fauna)	per m ³	178

B. Kango
Report Prepared by:



For Mitra S.K. Private Limited
A. K. Routh
Authorized Signatory

N-5/100, Ground Floor
 RC Village, Nayapalli
 Bhubaneswar - 751015
 CIN : US1908WB1956PTC023037

T : (0674) 2362916 / 2360917
 F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/516
Date : 04.02.2023
Sample No. : MSKGL/ED/2022-23/01/00616
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 07.01.2023

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.44
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3005.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.71
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	247.0
5.	Moisture content	%	Lab Method	24.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2247.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	460.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	147.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	47.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2784.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	354.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	10.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	6.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	14.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	366.0

Ref. No. BBS/516

Date- 04.02.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	6.4
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	3777.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	20.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rf1m:2014	438.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	334.0
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	43.0
27.	Silt	%	TPM/MSK/P&E/1/36A	35.0
28.	Texture	None	TPM/MSK/P&E/1/36A	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.	1540
2.	Total count (Phytobenthos)	50 mg wet sediment	280
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	---	1.77
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Nitzschia distans</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-42, Bivalvia-18
8.	Total no. of species encountered (Fauna)	Nos.	14
9.	Total fauna (Fauna)	per m ³	198

A. K. Singh
Report Prepared by:



For Mitra S.K. Private Limited
A. K. Singh
Authorized Signatory

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
CIN : U51902WB1956PTC023007

T : (0674) 2382916 / 2360917
F : (0674) 2362918

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 : 04.02.2023
Sample No. : MSKGL/ED/2022-23/01/00100
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 21.01.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	6.97
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2472.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.70
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	260.0
5.	Moisture content	%	Lab Method	24.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2380.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	478.0
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	9.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	90.0
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	2171.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	431.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	14.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	22.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	20.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	317.0

Ref. No. BBS/517

Date- 03.12.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	12.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	3388.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	32.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfim:2014	429.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	497.0
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	33.0
27.	Silt	%	TPM/MSK/P&E/1/36A	30.0
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.	Fungus (Phytobenthos)	CFU/g dry wt.	1380
2.	Total count (Phytobenthos)	50 mg wet sediment	270
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	---	1.62
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Spirulina aeruginea</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-57,Bivalvia-29
8.	Total no. of species encountered (Fauna)	Nos.	24
9.	Total fauna (Fauna)	per m ²	240

S. K. Singh
Report Prepared by:



For Mitra S.K. Private Limited

A. K. Singh
Authorized Signatory

N-5/100, Ground Floor
 IRC Village, Nayapalli
 Bhubaneswar - 751015
 CIN : U51909WB1366FTC023037

T : (0674) 2362916 / 2362917
 F : (0674) 2362918

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 : 04.02.2023
Sample No. : MSKGL/ED/2022-23/01/00101
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 21.01.2023

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rflin:2011	7.40
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rflin:2006	2660.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rflin:2015	6.4
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	250.0
5.	Moisture content	%	Lab Method	18.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2100.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	401.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	137.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	228.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1027.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	170.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	17.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	13.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	22.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	167.0

Ref. No. BBS/518

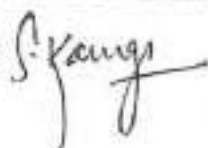
Date- 04.02.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	12.8
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1540.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	16.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflin:2014	187.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	164.0
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	32.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	29.0

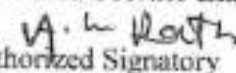
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1847
2.	Total count (Phytobenthos)	50 mg wet sediment	294
3.	No of species (Phytobenthos)	Nos.	14
4.	Diversity index (Phytobenthos)	----	1.89
5.	Major Species (phytobenthos)	----	<i>Gyrosigma sp., Nitzschia distans</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-88, Bivalvia-32
8.	Total no. of species encountered (Fauna)	Nos.	12
9.	Total fauna (Fauna)	per m ³	180

Report Prepared by:



For Mitra S.K. Private Limited


 Authorized Signatory


Ref: MSKGL/ED/BHU-2022/01200

Date: 04.02.2023


Site Specific Monitored Meteorological Data

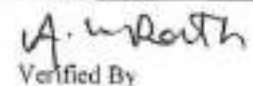
For : The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha

Sr. No.	Parameters	January.23	
1.	Temperature (°C)	Minimum	15.1
		Maximum	29.2
		Average	20.9
2.	Relative Humidity (%)	Minimum	33.0
		Maximum	99.5
		Average	69.7
3.	Wind Speed (m/s)	Minimum	0.0
		Maximum	11.3
		Average	3.0
4.	Wind Direction (%)	N	8.9
		NNE	20.4
		NE	2.1
		ENE	15.4
		E	3.0
		ESE	1.89
		SE	5.66
		SSE	10.1
		S	7.45
		SSW	2.44
		SW	9.85
		WSW	2.07
		W	6.45
5.	Rainfall (mm)	WNV	2.41
		CALM	7.53
		Total	0.0
		Minimum Day Wise	0.0
		Maximum Day Wise	0.0
6.	Ambient Pressure (mm Hg)	Average	0.0
		Minimum	746.8
		Maximum	758.7
		Average	752.0

(Source - Site Specific Data)

Prepared By





 Verified By

MONTHLY ENVIRONMENT MONITORING REPORT

DECEMBER-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



TESTING * INSPECTION

Shrachi Centre (5th Floor)

74B, Acharya Jagadish Chandra Bose Road
Kolkata – 700016 (West Bengal)

Mitra S. K. Private Limited

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U51909WB1958PTC023037]



T : (0674) 2362916, 2360917
F : (0674) 2362918

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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00842
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 03.12.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.90	7.07
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	102.0	8.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	80.0	4.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	184.0	12.8
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	7.4	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH ₃ -F 2017	19.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	25.0	1.7
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1700.0	98.0

S. K. Ganguly
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

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

T : (0674) 2362918, 2380917
F : (0674) 2382918

TEST REPORT

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

Report No. : BBS/305
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00846
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 03.12.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.71	7.21
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	128.0	10.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	150.0	7.4
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	320.0	19.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	11.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	30.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rflm:2014	45.0	3.4
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	3200.0	130.0

Report Prepared by:
S. K. Ranga



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

Mitra S. K. Private Limited

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

T : (0674) 2362916, 2360917
F : (0674) 2362918



TEST REPORT

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

Report No. : BBS/306
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/01717
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 17.12.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.85	7.77
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	132.0	12.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	189.0	4.4
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	385.0	12.8
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	14.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	34.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfin:2014	49.0	2.7
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2400.0	124.0

S. K. Kango
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rathi
Authorized Signatory

Mitra S. K. Private Limited

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

T : (0674) 2362916, 2360917
F : (0674) 2362918



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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00840
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 03.12.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.92	7.01
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	131.0	8.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	118.0	9.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	248.0	24.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	5.4	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	22.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Riffin:2014	29.0	3.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1600.0	77.0

S. Kango
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

Mitra S. K. Private Limited

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

T : (0674) 2362916, 2360917
F : (0674) 2362918



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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/01711
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 17.12.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.72	7.12
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	90.0	14.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	137.0	7.0
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	280.0	20.4
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	8.1	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	16.0	2.4
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfim:2014	24.0	4.7
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1800.0	90.0

S. K. Ganguly
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rathi
Authorized Signatory

TEST REPORT

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

Report No. : BBS/302
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00844
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 03.12.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.58	7.06
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	141.0	6.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	159.0	5.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	314.0	15.6
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	10.6	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	32.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfm:2014	41.0	2.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2100.0	110.0

B. K. Ranga
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

Mitra S. K. Private Limited

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

T : (0674) 2362916, 2360917
F : (0674) 2362918



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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/01715
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 17.12.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.77	7.34
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	80.0	8.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	140.0	5.6
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	320.0	18.1
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	12.6	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	29.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfn:2014	41.0	1.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1550.0	69.0

S. K. Kango
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory

TEST REPORT

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

Report No. : BBS/324
Date : 05.01.2023
Sample No. : MSKGL/FD/2022-23/12/00819
Date of sampling : 17.12.2022
Sampling Description : Ground Water
Sampling Location : Kanak Prasad
Sampling Done By : Mr. Sourmya 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 Rfim: 2012	8.04
2.	Sulphate (as SO ₄)	mg/l	200	400	IS 3025 (Part 24)-1986 Rfim: 2014	56.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)-1991 Rfim: 2014	56.0
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 Rfim: 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 Rfim: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)-2008 Rfim: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rfim:2012	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rfim:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rfim: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)-1986 Rfim:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rfim: 2014	0.32
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rfim: 2014	129.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rfim:2012	420.0
19.	Alkalinity (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 23)-1986 Rfim: 2009	167.0
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 Rfim: 2014	26.0
22.	Total Hardness (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 21)-2013	176.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO ₃)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rfim: 2014	2.4
26.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	IS 3025 (Part 43)-1992; Rfim: 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

Ref. No. BBS/324

Date- 05.01.2023

32.	Sulphide (as H ₂ S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rfim: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rfim: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rfim: 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 Rfim: 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 (2 nd Edn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. K. Rang
 Report Prepared by:



For Mitra S. K. Private Limited.

A. K. Rathi
 Authorized Signatory

Mitra S. K. Private Limited

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



T : (0674) 2362916, 2360917

F : (0674) 2362918

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

TEST REPORT

Report No. : BBS/325
Date : 05.01.2023
Sample No. : MSKGL/FD/2022-23/12/01478
Date of sampling : 17.12.2022
Sampling Description : Ground Water
Sampling Location : Balisahi
Sampling Done By : Mr. Soumya Ranjan Ghadni

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 Rfim: 2012	7.94
2.	Sulphate (as SO ₄)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rfim: 2014	42.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rfim: 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 Rfim: 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 Rfim: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rfim: 2013	0.53
12.	Colour	Hazen	5	15	3025 (Part 4)-1983, Rfim:2012	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rfim:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rfim: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rfim:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rfim: 2014	0.32
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rfim: 2014	108.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984, Rfim:2012	455.0
19.	Alkalinity (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rfim: 2009	178.0
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 Rfim: 2014	28.0
22.	Total Hardness (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 21)-2013	187.0
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 Rfim: 2014	1.5
26.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rfim: 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

Ref. No. BBS/325

Date- 05.01.2023

32.	Sulphide (as H ₂ S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; RfIm: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; RfIm: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; RfIm: 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 RfIm: 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 (23 rd Edn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. K. Singh
Report Prepared by:



For Mitra S. K. Private Limited.

A. K. Rath
Authorized Signatory

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

T : (0674) 2362916, 2360917

F : (0674) 2362918

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

TEST REPORT

Report No. : BBS/326
 Date : 05.01.2023
 Sample No. : MSKGL/FD/2022-23/09/00821
 Date of sampling : 17.12.2022
 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 26° C)	---	6.5 - 8.5	No Relaxation	IS 3025 (Part 11)-1984 Rfim: 2012	7.28
2.	Sulphate (as SO ₄)	mg/l	200	400	IS 3025 (Part 24)- 1986 Rfim: 2014	40.0
3.	Calcium (as Ca)	mg/l	75	200	IS 3025 (Part 40)- 1991 Rfim: 2014	45.0
4.	Arsenic (as As)	mg/l	0.01	0.05	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
5.	Lead (as Pb)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
6.	Zinc (as Zn)	mg/l	5.0	15.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
7.	Copper (as Cu)	mg/l	0.05	1.5	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
8.	Mercury (as Hg)	mg/l	0.001	No Relaxation	IS 3025 (Part 48)-1994 Rfim: 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 Rfim: 2014	BDL(DL:0.5)
11.	Fluoride (as F)	mg/l	1.0	1.5	IS 3025 (Part 60)- 2008 Rfim: 2013	BDL(DL:0.2)
12.	Colour	Hazen	5	15	3025 (Part 4)-1983; Rfim:2012	BDL(DL:1.0)
13.	Odour	---	Agreeable	Agreeable	IS 3025 (Part 5)-1983 Rfim:2012	Agreeable
14.	Turbidity	N.T.U	1	5	IS 3025 (Part 10)-1984 Rfim: 2012	BDL(DL:1.0)
15.	Residual free Chlorine	mg/l	0.2	1.0	IS 3025 (Part 26)- 1986 Rfim:2014	BDL(DL:0.1)
16.	Iron (as Fe)	mg/l	0.3	No Relaxation	IS 3025 (Part 53)-1988 Rfim: 2014	0.42
17.	Chloride (as Cl)	mg/l	250	1000	IS 3025 (Part 32)-1988 Rfim: 2014	127.0
18.	Total Dissolved Solids	mg/l	500	2000	IS 3025 (Part 16)-1984; Rfim:2012	487.0
19.	Alkalinity (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 23)- 1986 Rfim: 2009	190.0
20.	Aluminium (as Al)	mg/l	0.03	0.2	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
21.	Magnesium (as Mg)	mg/l	30	100	IS 3025 (Part 46)-1994 Rfim: 2014	26.0
22.	Total Hardness (as CaCO ₃)	mg/l	200	600	IS 3025 (Part 21)-2013	160.0
23.	Boron (as B)	mg/l	0.5	1.0	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.3)
24.	Manganese (as Mn)	mg/l	0.1	0.3	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.02)
25.	Nitrate (as NO ₃)	mg/l	45	No Relaxation	IS 3025 (Part 34)-1988 Rfim: 2014	0.94
26.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	0.001	0.002	IS 3025 (Part 43)- 1992; Rfim: 2014	BDL(DL:0.001)
27.	Selenium (as Se)	mg/l	0.01	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
28.	Total Chromium (as Cr)	mg/l	0.05	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.01)
29.	Silver (as Ag)	mg/l	0.1	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.005)
30.	Barium (as Ba)	mg/l	0.7	No Relaxation	IS 3025 (Part 2) 2004 RA 2014	BDL(DL:0.1)
31.	Salinity	mg/l	---	---	IS 3025 (Part 14)- 2013	40.0

Ref. No. BBS/326

Date- 05.01.2023

32.	Sulphide (as H ₂ S)	mg/l	0.05	No Relaxation	IS 3025 (Part 29)- 1991; Rfim: 2014	BDL(DL:0.02)
33.	Ammonia (as total ammonia-N)	mg/l	0.5	No Relaxation	IS 3025 (Part 34)- 1988; Rfim: 2014	BDL(DL:0.1)
34.	Chloramines	mg/l	4.0	No Relaxation	IS 3025 (Part 26)- 1986; Rfim: 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 Rfim: 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 (23 rd Edn.) 6440C	BDL(DL:0.0001)
39.	Polychlorinated Biphenyls (PCB)	mg/l	0.0005	No Relaxation	US EPA 8082	BDL(DL:0.0005)

S. K. Singh
Report Prepared by:

For Mitra S. K. Private Limited.

A. K. Rathi
Authorized Signatory



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

T : (0874) 2362916, 2360917
F : (0874) 2362918

TEST REPORT

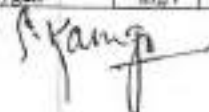
Name & Address of the Customer :
THE DHAMRA PORT COMPANY LIMITED,
AT : DOSINGA, PO : DHAMRA
DIST : BHADRAK, PIN : 756171 ODISHA

Report No. : BBS/328
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00789
Sample Description : Surface Water
Sampling Location : Raw Water Reservoir
Date of Sampling : 17.12.2022

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	6.89
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	0.41
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition, 3500 Fe B 2017	5.8
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound as C ₆ H ₅ OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994; Rfim: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 ^{VI}	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	125.0
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edm, 2550 B	25.0
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	7.6
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: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 Rfim:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition, 4500P, B -D 2017	BDL(DL:0.05)
30.	Ammonia as NH ₃	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO ₃	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	0.59
32.	Bio-assay Test	---	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	---	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve
34.	Dissolved Oxygen	mg/l	-----	APHA 23rd-2012,4500-O-C	6.3

Report Prepared by:




Mitra S. K. Private Limited

A. K. Rathy
Authorized Signatory

T : (0674) 2362916, 2360917
F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/327
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00788
Sample Description : Surface Water
Sampling Location : Matai River Near DPCL Intake Point
Date of Sampling : 17.12.2022

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	7.15
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	0.56
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition, 3500 Fe B 2017	6.0
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound as C ₆ H ₅ OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994; Rfim:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr ⁶⁺	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	136.0
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 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	8.2
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:0.3)
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 Rfim: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)
31.	Nitrate Nitrogen as NO ₃	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	0.68
32.	Bio-assay Test	---	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	---	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve
34.	Dissolved Oxygen	mg/l	-----	APHA 23rd-2012, 4500-O.C	8.5

Report Prepared by:

A. K. Roy



Mitra S. K. Private Limited

A. K. Roy
Authorized Signatory

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

T : (0674) 2362916, 2360917
F : (0674) 2362918

Date: 05.01.2023

SOIL ANALYSIS REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00670
Type of Sample	Soil
Sampling Location	S1 : Dosinga S2 : Port Site
Date of Sampling	28.12.2022
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				S1	S2
1.	pH Value	---	IS 2720 (Part-26)-1987	7.84	7.96
2.	Colour	---	TPM/MSK/P&E/1/45	4 YR 6/4 Reddish Brown	10 YR 2.5/4 Brown
3.	Copper (as Cu)	mg/kg	EPA 610D	8.0	24.0
4.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	6.9	7.9
5.	Manganese (as Mn)	mg/kg	EPA 610D	152.0	378.0
6.	Bulk Density	g/cc	IS 2720 (Part-20)-1975	1.29	1.33
7.	Cadmium (as Cd)	mg/kg	EPA 610D	<2.0	<2.0
8.	Lead (as Pb)	mg/kg	EPA 610D	<2.0	14.0
9.	Nickel (as Ni)	mg/kg	EPA 610D	3.0	36.0
10.	Total Chromium (as Cr)	mg/kg	EPA 610D	16.0	70.0
11.	Gravel	%	Lab Method	<1.0	1.8
14.	Texture	---	TPM/MSK/P&E/1/36A	Sand	Clay
15.	Electrical Conductivity	us/cm	IS 14767:2000, RA 2016	1689.0	1497.0
16.	Available Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	678.0	758.0
17.	Available Potassium (as P)	mg/kg	TPM/MSK/P&E/1/5	80.0	98.0
18.	Total Nitrogen (as N)	mg/kg	IS 14684:1999, RA 2014	159.0	197.0
19.	Total Organic Carbon	%	IS 2720 (Part-22)-1972	0.18	0.79
20.	Organic Matter	%	IS 2720 (Part-22)-1972	0.24	1.8
21.	Sodium Adsorption Ratio	---	TPM/MSK/P&E/1/31	3.9	9.1
22.	Available Phosphorus (as P)	mg/kg	TPM/MSK/P&E/1/12	6.4	8.4
23.	Zinc (as Zn)	mg/kg	EPA 610D	7.8	36.0
24.	Water Holding Capacity	%	TPM/MSK/P&E/1/17	20.0	40.0
25.	Cation Exchange Capacity	mec/100g	IS 2720 (Part-24)-1974	16.0	32.0
26.	Total Porosity	%	TPM/MSK/P&E/1/30	42.0	40.0
27.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	137.0	244.0
28.	Infiltration Rate	mm/hr	Method of Analysis of Soil by HLS.Tandon	25.0	12.7
29.	Particle Size Distribution	Sand	TPM/MSK/P&E/1/36A	34.0	40.0
		Silt		29.0	28.0
		Clay		37.0	32.0

Report Prepared By:

S. Kango

For Mitra S. K. Private Limited

A. K. Rath
Authorized Signatory



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

T : (0674) 2362916, 2360917
F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/332
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00817
Sample Description : Waste Water
Sampling Location : DRDO North Gate
Date of Sampling : 17.12.2022

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	6.74
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	0.58
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition, 3500 Fe B 2017	0.61
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound as C ₆ H ₅ OH	mg/l	1.0	APHA (23rd Edition)5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition)4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition)3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 48)-1994, Rfms:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition)3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition)3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr ⁶⁺	mg/l	0.1	APHA 22nd Edition, 3500 Cr B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition)3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended Solids	mg/l	100.0	APHA 23rd Edition, 2540D	33.0
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edtn, 2550 B	25.0
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition)5210B 2017	15.0
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	40.0
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:0.3)
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition)4500 S2- D, 2017	BDL(DL:0.1)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 Rfms:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition 4500P, B - D 2017	0.36
30.	Ammonia as NH ₃	mg/l	5.0	APHA 23rd Edn 4500NH3-F 2017	BDL(DL:0.1)
31.	Nitrate Nitrogen as NO ₃	mg/l	10.0	APHA (23rd Edition) 4500- NO3-E, 2017	1.4
32.	Bio-assay Test	---	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	---	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/53	Pass through 850µm IS sieve

Report Prepared by:

P. Kamra

Mitra S. K. Private Limited

A. K. Rathy
Authorized Signatory

Mitra S. K. Private Limited

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



T: (0674) 2362916, 2360917
F: (0674) 2362918

TEST REPORT

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

Report No. : BBS/331
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00816
Sample Description : Waste Water
Sampling Location : DRDO South Gate
Date of Sampling : 17.12.2022

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.	Odeour	---	---	APHA 23rd Edition, 2150B	Agreeable
3.	pH at 25°C	---	5.5 - 9.0	APHA 23rd Edition, 4500-H-B	6.53
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	0.84
6.	Iron as Fe	mg/l	3.0	APHA 23rd Edition, 3500 Fe B 2017	0.74
7.	Manganese as Mn	mg/l	2.0	APHA (23rd Edition) 3120B 2017 (ICP OES)	BDL(DL:0.02)
8.	Phenolic Compound as C ₆ H ₅ OH	mg/l	1.0	APHA (23rd Edition) 5530C 2017 (Chloroform Extraction)	BDL(DL:0.001)
9.	Selenium as Se	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
10.	Cadmium as Cd	mg/l	2.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.001)
11.	Cyanide as CN	mg/l	0.2	APHA (23rd Edition) 4500 CN- F 2017	BDL(DL:0.01)
12.	Lead as Pb	mg/l	0.1	APHA (23rd Edition) 3120B 2017	BDL(DL:0.005)
13.	Mercury as Hg	mg/l	0.01	IS 3025(Part 4B)-1994; RfIm:2014	BDL(DL:0.001)
14.	Nickel as Ni	mg/l	3.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.02)
15.	Arsenic as As	mg/l	0.2	APHA (23rd Edition) 3120B 2017 (ICP OES)	BDL(DL:0.005)
16.	Total Chromium as Cr	mg/l	2.0	APHA (23rd Edition) 3111 D 2017 (AAS Flame)	BDL(DL:0.01)
17.	Zinc as Zn	mg/l	5.0	APHA (23rd Edition) 3120B 2017	BDL(DL:0.02)
18.	Hexavalent Chromium as Cr ⁶⁺	mg/l	0.1	APHA 22nd Edition, 3500 Cr.B	BDL(DL:0.01)
19.	Vanadium as V	mg/l	0.2	APHA (23rd Edition) 3120B 2017 (ICP OES)	BDL(DL:0.2)
20.	Total Suspended solids	mg/l	100.0	APHA 23rd Edition, 2540D	39.0
21.	Temperature	Deg C	Shall not exceed 5° C above the receiving water Temp.	APHA 23rd Edtn, 2550 B	25.0
22.	BOD (3days at 25°C)	mg/l	30.0	APHA (23rd Edition) 5210B 2017	14.0
23.	COD	mg/l	250.0	APHA 23rd Edition, 5220B 2017	52.0
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 Kjeldahl Nitrogen as N	mg/l	100.0	APHA (23rd Edition) 4500- Norg-B, 2017	BDL(DL:0.3)
27.	Sulphide as S	mg/l	2.0	APHA (23rd Edition) 4500 S2- D, 2017	BDL(DL:0.1)
28.	Total Residual Chlorine	mg/l	1.0	IS 3025(Part-26)-1986 RfIm:2009	BDL(DL:0.1)
29.	Dissolved Phosphate as P	mg/l	5.0	APHA 23rd Edition, 4500P, B -D 2017	0.35
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-B, 2017	1.3
32.	Bio-assay Test	---	90% survival of fish after 96 hrs in 100% effluent	IS 6582(Part 2)2001, Ed.2.1 (2002-12)	All Fishes are survived in 100% effluent after 96 hrs
33.	Particle Size of Suspended Solids	---	Shall pass 850µm IS sieve	TPM/MSK/P&E/3/55	Pass through 850µm IS sieve

Report Prepared by:

S. K. Raut



Mitra S. K. Private Limited

A. K. Raut
Authorized Signatory

Mitra S. K. Private Limited

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

T: (0674) 2362916, 2360917
F: (0674) 2362918



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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00507
Sample Description : Flue Gas Monitoring
Date of Sampling : 17.12.2022
Time of Sampling : 02:40 PM

ANALYSIS RESULT

A. General information about stack :				
1.	Stack connected to	Kalibhanja Guest House DG (Small)		
2.	Emission due to	High Speed Diesel (HSD)		
3.	Material of construction of stack	M.S		
4.	Shape of stack	Circular		
5.	Generation Capacity	62.5 Kva		
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		
4.	Area of Stack	0.00503 m ²		
C. Analysis/Characteristic of stack:				
1.	Fuel used	: HSD		
2.	Fuel Consumption	: NA		
D. Results of sampling & analysis of gaseous emission				
		Result	Standard as per Moef & CC	METHOD
1.	Temperature of emission (°C)	101	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	14.78	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm ³ /hr.)	202.83	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	0.98	≤ 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)	0.157	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	0.029	≤ 0.3 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	0.017	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	0.174	≤ 4.7 (g/Kw/hr)	USEPA Part 18

S. K. Kanyo
Report Prepared by:



For Mitra S.K. Private Limited

A. K. Rath

Authorized Signatory

Mitra S. K. Private Limited

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



T : (0674) 2362916, 2360917
F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/365
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00508
Sample Description : Flue Gas Monitoring
Date of Sampling : 20.12.2022
Time of Sampling : 11:05 AM

ANALYSIS RESULT

A. General information about stack :				
1.	Stack connected to	MCC-1 DG		
2.	Emission due to	High Speed Diesel (HSD)		
3.	Material of construction of stack	M.S		
4.	Shape of stack	Circular		
5.	Generation Capacity	160 KVA		
B. Physical characteristics of stack :				
1.	Height of the stack from ground level	3.21 m		
2.	Diameter of the stack at sampling point	0.008 m		
3.	Height of the sampling point from GL	3.21 m		
4.	Area of Stack	0.0050 m ²		
C. Analysis/Characteristic of stack:				
1.	Fuel used	: HSD		
2.	2. Fuel Consumption	: NA		
D. Results of sampling & analysis of gaseous emission				
		Result	Standard as per Moef & CC	METHOD
1.	Temperature of emission (°C)	124	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	21.16	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm ³ /hr.)	273.83	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	0.150	≤ 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)	0.350	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	0.060	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	0.052	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	0.402	≤ 4.0 (g/Kw/hr)	USEPA Part 18

P. Kango
Report Prepared by:



For Mitra S.K. Private Limited

A.K. Rath
Authorized Signatory

Mitra S. K. Private Limited

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

T: (0674) 2362918, 2360917
F: (0674) 2362918



TEST REPORT

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

Report No. : BBS/366
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/22/00509
Sample Description : Flue Gas Monitoring
Date of Sampling : 20.12.2022
Time of Sampling : 12:50 PM

ANALYSIS RESULT

A. General information about stack :				
1.	Stack connected to	PSS DG		
2.	Emission due to	High Speed Diesel (HSD)		
3.	Material of construction of stack	M.S		
4.	Shape of stack	Circular		
5.	Generation Capacity	160 KVA		
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 m ²		
C. Analysis/Characteristic of stack:				
1.	Fuel used	: HSD		
2.	Fuel Consumption	: NA		
D. Results of sampling & analysis of gaseous emission				
		Result	Standard as per Moef & CC	METHOD
1.	Temperature of emission (°C)	122	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	20.65	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm ³ /hr.)	339.59	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	0.098	≤ 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)	0.140	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	0.035	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	0.019	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	0.159	≤ 4.0 (g/Kw/hr)	USEPA Part 18

S. K. Kang
Report Prepared by:



For Mitra S.K. Private Limited

A.K. Rath
Authorized Signatory

Mitra S. K. Private Limited

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

T : (0674) 2362916, 2360917
F : (0674) 2362918



TEST REPORT

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

Report No. : BBS/370
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00512
Sample Description : Flue Gas Monitoring
Date of Sampling : 20.12.2022
Time of Sampling : 04:00 PM

ANALYSIS RESULT

A. General information about stack :				
1.	Stack connected to	Township 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	3.52 m		
2.	Diameter of the stack at sampling point	0.125 m		
3.	Height of the sampling point from GL	3.52 m		
4.	Area of Stack	0.01227 m ²		
C. Analysis/Characteristic of stack:				
1.	Fuel used	: HSD		
2.	Fuel Consumption	: NA		
D. Results of sampling & analysis of gaseous emission				
		Result	Standard as per Moef & CC	METHOD
1.	Temperature of emission (°C)	118	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	11.86	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm ³ /hr.)	379.56	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	0.210	≤ 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)	0.330	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	0.072	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	0.032	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	0.362	≤ 4.0 (g/Kw/hr)	USEPA Part 18

S. K. Ranga
Report Prepared by:



For Mitra S.K. Private Limited

A. K. Rath
Authorized Signatory

Mitra S. K. Private Limited

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



T : (0674) 2362916, 2360917
F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/372
Date : 05.01.2023
Sample No. : MSKGL/ED/2020-21/12/00514
Sample Description : Flue Gas Monitoring
Date of Sampling : 20.12.2022
Time of Sampling : 03:00 PM

ANALYSIS RESULT

A. General information about stack :				
1.	Stack connected to	Wagon Tippler DG		
2.	Emission due to	High Speed Diesel (HSD)		
3.	Material of construction of stack	M.S		
4.	Shape of stack	Circular		
5.	Generation Capacity	160 KwA		
B. Physical characteristics of stack :				
1.	Height of the stack from ground level	1.8 m		
2.	Diameter of the stack at sampling point	0.1 m		
3.	Height of the sampling point from GL	1.8		
4.	Area of Stack	0.0078 m ²		
C. Analysis/Characteristic of stack:				
1.	Fuel used	: HSD		
2.	Fuel Consumption	: NA		
D. Results of sampling & analysis of gaseous emission				
		Result	Standard as per Moef & CC	METHOD
1.	Temperature of emission (°C)	134	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	14.49	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm ³ /hr.)	445.66	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	0.180	≤ 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)	0.210	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	0.039	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	0.021	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	0.231	≤ 4.0 (g/Kw/hr)	USEPA Part 18

S. Kango
Report Prepared by:



For Mitra S.K. Private Limited

A.K. Rathi

Authorized Signatory

Mitra S. K. Private Limited

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



T : (0674) 2362916, 2360917
F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/376
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00518
Sample Description : Flue Gas Monitoring
Date of Sampling : 21.12.2022
Time of Sampling : 03:40 PM

ANALYSIS RESULT

A. General information about stack :				
1.	Stack connected to	General Substation (GSS Building 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	200 Kva		
B. Physical characteristics of stack :				
1.	Height of the stack from ground level	2.3 m		
2.	Diameter of the stack at sampling point	0.0652 m		
3.	Height of the sampling point from GL	2.3 m		
4.	Area of Stack	0.00334 m ²		
C. Analysis/Characteristic of stack:				
1.	Fuel used	: HSD		
2.	Fuel Consumption	: NA		
D. Results of sampling & analysis of gaseous emission				
		Result	Standard as per Moef & CC	METHOD
1.	Temperature of emission (°C)	116	----	IS 11255 (Part III)
2.	Barometric pressure (mm of Hg)	760	----	USEPA Part 2
3.	Velocity of gas (m/sec.)	8.6	----	IS 11255 (Part III)
4.	Quantity of gas flow (Nm ³ /hr.)	75.28	----	IS 11255 (Part III)
5.	Concentration of Carbon monoxide (g/kw-hr)	0.040	≤ 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)	0.066	----	IS 11255 (Part VII)
8.	Concentration of Particulate Matters ((g/kw-hr))	0.018	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9.	Concentration of Hydrocarbon (g/kw-hr)	0.010	----	USEPA Part 18
10.	NOx + HC (g/kw-hr)	0.076	≤ 4.0 (g/Kw/hr)	USEPA Part 18

Report Prepared by:
S. K. Ranga



For Mitra S.K. Private Limited

A. K. Rath
Authorized Signatory

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/2022-23/00200
Type of Sample	Marine Water
Sampling Location	Dhamra River Mouth
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
Sampling Done by	Mr. Soumya Ranjan Ghadai

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Razen	APHA (23 rd Edition) 2120B, 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	59.0	48.0
5	pH	---	APHA (23 rd Edition) 4500-41-B	7.22	6.97
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	19255.0	20228.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B, 2017	7546.0	6359.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	116.0	98.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	11310.0	9927.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B, 2017	1278.0	1121.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	327.0	250.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	1378.0	1029.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	7422.0	6291.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-O-C/G	6.2	6.0
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B, 2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B, 2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B, 2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition) 4500-SO ₄ -E	1047.0	790.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition) 4500-NO ₂ B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition) 4500-NO ₃ -E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition) 4500-NH ₃ F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁶⁺)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994/Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994/Rffm:2014	<0.5	<0.5

Prepared By - *S. K. Rang*



Checked By - *A. K. Rath*

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/2022-23/00200
Type of Sample	Marine Water
Sampling Location	Dhamra River Mouth
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
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 (23 rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	59.0	48.0
5	pH	---	APHA (23 rd Edition) 4500-H-B	7.22	6.97
6	Electrical Conductivity	usem	APHA (23 rd Edition) 2510 B	19255.0	20228.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B,2017	7546.0	6539.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	116.0	98.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	11310.0	9927.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	1278.0	1121.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	327.0	259.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	1378.0	1029.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	7422.0	6291.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition) 4500-O-C/G	6.2	6.0
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition) 4500-SO ₄ -E	1047.0	790.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition) 4500-NO ₂ B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition) 4500-NO ₃ -E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition) 4500-NH ₃ F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rffn:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rffn:2014	<0.5	<0.5

Prepared By - *S. K. Ranjan*



Checked By - *A. K. Rath*

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/2022-23/00200
Type of Sample	Marine Water
Sampling Location	Dry Bulk Cargo Berth Face
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
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 (23 rd Edition) 2120B, 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	84.0	69.0
5	pH	---	APHA (23 rd Edition) 4500-H-B	7.04	7.42
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	16177.0	14883.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B, 2017	11470.0	10950.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	138.0	101.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	11789.0	9197.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B, 2017	1680.0	1380.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	339.0	296.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	1411.0	1100.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	6237.0	3880.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-O-C/G	6.1	5.6
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B, 2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B, 2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B, 2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition) 4500-SO4-E	689.0	527.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition) 4500-NO2-B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition) 4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition) 4500-NH3-F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N-C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994-Rffm;2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994-Rffm;2014	<0.5	<0.5

Prepared By - *S. Kango*



Checked By - *A.K. Rath*

Mitra S. K. Private Limited

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



T: (0674) 2362916, 2360917
 F: (0674) 2362918

Date: 05.01.2023

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/2022-23/00200
Type of Sample	Marine Water
Sampling Location	Liquid/Gas/Cyrogenic Berth Face
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
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 (23 rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	162.0	112.0
5	pH	---	APHA (23 rd Edition) 4500-H-B	7.80	6.89
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	16114.0	12529.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B,2017	8387.0	7252.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	150.0	94.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	11998.0	10740.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	2165.0	1750.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	520.0	410.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	1535.0	1296.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	7714.0	5845.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition) 4500-D-C/G	6.4	5.9
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B,2017	<2.0	<2.2
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition) 4500-SO4-E	680.0	575.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition) 4500-NO2B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition) 4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition) 4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	5.2	2.6
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;R1fm-2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;R1fm-2014	<0.5	<0.5

Prepared By - *S. K. Ganguly*



Checked By - *A. K. Rath*

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/2022-23/00200
Type of Sample	Marine Water
Sampling Location	Along Channel at 1Km
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
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 (23 rd Edition) 2120B, 2017	<1.0	<1.0
2	Odoar	---	APHA (23 rd Edition) 2150B	Agreable	Agreable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	90.0	72.0
5	pH	---	APHA (23 rd Edition) 4500-H-B	7.64	7.19
6	Electrical Conductivity	u/cm	APHA (23 rd Edition) 2510 B	30139.0	29617.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B, 2017	18278.0	15033.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	151.0	120.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	26548.0	24477.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2140B, 2017	3681.0	3720.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	567.0	380.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	3366.0	3379.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	14800.0	11439.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-O-C/G	6.8	6.4
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B, 2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B, 2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B, 2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition) 4500-SO ₄ -E	1387.0	1244.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition) 4500-NO ₂ B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition) 4500-NO ₃ -E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition) 4500-NH ₃ F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁺)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rfln:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rfln:2014	<0.5	<0.5

Prepared By - *S. Yang*

Checked By - *A. K. Rath*



Mitra S. K. Private Limited

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



T: (0674) 2362916, 2360917
F: (0674) 2362918

Date: 05.01.2023

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/2022-23/00200
Type of Sample	Marine Water
Sampling Location	Along Channel at 5Km
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
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 (23 rd Edition) 2120B 2017	<1.0	<1.0
2	Odour	—	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	88.0	49.0
5	pH	—	APHA (23 rd Edition) 4500-H-B	7.31	6.88
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	36240.0	26600.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B,2017	23590.0	18254.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	139.0	101.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	23704.0	21412.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	4457.0	3289.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	714.0	647.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	3371.0	3088.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	13270.0	12427.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-O-C/G	6.2	5.6
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition)4500-SO4-E	1686.0	1322.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition)4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	2.4	0.92
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁺)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;Rfim:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;Rfim:2014	<0.5	<0.5

Prepared By - *S. Kango*

Checked By - *A.K. Rath*



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/2022-23/00200
Type of Sample	Marine Water
Sampling Location	Along Channel at 10Km
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
Sampling Done by	Mr. Soumya Ranjan Ghadal

Sl. No.	Name of the Parameters	Unit	Test Method	Analysis Result	
				Surface Water	Bottom water
1	Colour	Hazen	APHA (23 rd Edition) 2130B 2017	<1.0	<1.0
2	Odour	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	111.0	62.0
5	pH	---	APHA (23 rd Edition) 4500-H-B	7.94	7.66
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	33712.0	31561.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B,2017	22342.0	18316.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	176.0	131.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	22323.0	17912.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	4762.0	4399.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	688.0	597.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	3875.0	3764.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	181.0	129.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition)-4500-O-C/G	5.9	5.2
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition)4500-SO4-E	1287.0	1094.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition)4500-NO2B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition)4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition)4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part 48)-1994;R/In:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part 39)-1994;R/In:2014	<0.5	<0.5

Prepared By - *S. Kanga*

Checked By - *A.K. Rao*



Mitra S. K. Private Limited

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



T : (0674) 2362916, 2360917
F : (0674) 2362918

Date: 05.01.2023

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/2022-23/00200
Type of Sample	Marine Water
Sampling Location	Near Kanika Island
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
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 (23 rd Edition) 2120B 2017	<1.0	<1.0
2	OLOUR	---	APHA (23 rd Edition) 2150B	Agreeable	Agreeable
3	Temperature	Deg C	APHA (23 rd Edition) 2550 B	25.0	25.0
4	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	162.0	154.0
5	pH	---	APHA (23 rd Edition) 4500-H-B	8.01	7.72
6	Electrical Conductivity	us/cm	APHA (23 rd Edition) 2510 B	31645.0	29946.0
7	Salinity	mg/l	APHA (23 rd Edition) 2520B,2017	21787.0	18041.0
8	Total Suspended Solids	mg/l	APHA (23 rd Edition) 2540 D	321.0	160.0
9	Total dissolved solids	mg/l	APHA (23 rd Edition) 2540C	31217.0	28487.0
10	Total Hardness	mg/l	APHA (23 rd Edition) 2340B 2017	3641.0	3270.0
11	Calcium Hardness	mg/l	APHA (23 rd Edition) 3500-Ca B	870.0	724.0
12	Magnesium Hardness	mg/l	APHA (23 rd Edition) 3500-Mg B	2635.0	2219.0
13	Chloride (as Cl)	mg/l	APHA (23 rd Edition) 4500-Cl B	14050.0	13486.0
14	Dissolved Oxygen	mg/l	APHA (23 rd Edition) 4500-O-C/G	6.2	5.9
15	Biochemical Oxygen Demand (3 days at 27°C)	mg/l	APHA (23 rd Edition) 5210B,2017	<2.0	<2.0
16	Chemical Oxygen Demand (COD)	mg/l	APHA (23 rd Edition) 5220B,2017	<4.0	<4.0
17	Oil & Grease	mg/l	APHA (23 rd Edition) 5220B,2017	<1.4	<1.4
18	Dissolved phosphates (as PO ₄)	mg/l	APHA (23 rd Edition) 4500-P D	<0.15	<0.15
19	Sulphate (as SO ₄)	mg/l	APHA (23 rd Edition) 4500-SO4-E	1572.0	1383.0
20	Nitrite (as NO ₂)	mg/l	APHA (23 rd Edition) 4500-NO2B	<0.01	<0.01
21	Nitrate (as NO ₃)	mg/l	APHA (23 rd Edition) 4500-NO3-E	<0.5	<0.5
22	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA (23 rd Edition) 4500-NH3F	<0.1	<0.1
23	Total Nitrogen	mg/l	APHA (23 rd Edition) 4500N C	<0.3	<0.3
24	Total Chromium	mg/l	APHA (23 rd Edition) 3111 D	<0.01	<0.01
25	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	APHA (23 rd Edition) 5530C	<0.001	<0.001
26	Hexavalent chromium (as Cr ⁺⁺)	mg/l	APHA (23 rd Edition) 3500 Cr B	<0.01	<0.01
27	Copper	mg/l	APHA (23 rd Edition) 3120B	<0.02	<0.02
28	Cadmium	mg/l	APHA (23 rd Edition) 3120B	<0.001	<0.001
29	Mercury	mg/l	IS 3025(Part-48)-1994;Rffm:2014	<0.001	<0.001
30	Floating material	mg/l	APHA (23 rd Edition) 2530B	<2.5	<2.5
31	Petroleum Hydrocarbon	mg/l	IS 3025(Part-19)-1994;Rffm:2014	<0.5	<0.5

Prepared By - *S. K. Singh*

Checked By - *A. K. Patra*



PHYTOPLANKTON MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00200
Type of Sample	Marine Sample (Phytoplankton)
Sampling Location	S1:Dhamra River Mouth S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face S4:Along Channel at 1Km S5:Along Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
Sampling Done by	Mr. Soumya Ranjan Ghadai

Name of the Parameters	Total count	No of species	Chlorophyll:-	Major Species	
Unit	Units/L	Nos.	mg/l	---	
Testing Method	APHA 10200	APHA 10200	APHA 10200H	APHA (23 rd Edition) 10200	
Analysis Result					
S-1	Surface Water	20000	7	0.72	Navicula, Vallisneria
	Bottom water	17000	9	0.48	Enteromorpha, Nereocystis
S-2	Surface Water	21000	4	0.84	Mouecotia, Enteromorpha
	Bottom water	10000	6	0.79	Mouecotia, Phormidium
S-3	Surface Water	25000	8	0.87	Cyclotella, Mouecotia
	Bottom water	19000	3	0.44	Vallisneria, Mouecotia
S-4	Surface Water	17000	7	0.58	Navicula, Fragilaria
	Bottom water	23000	9	0.88	Nereocystis, Zostera
S-5	Surface Water	26000	4	0.97	Vallisneria, Phormidium
	Bottom water	20000	6	0.62	Enteromorpha, Navicula
S-6	Surface Water	14000	4	0.80	Phormidium, Calothrix
	Bottom water	18000	2	0.58	Phormidium a, Enteromorpha
S-7	Surface Water	12000	7	0.70	Cyclotella, Mouecotia
	Bottom water	23000	6	0.79	Phormidium, Calothrix

Prepared By - *S. K. Ghadai*

Checked By - *A. K. Das*



T : (0674) 2362916, 2360917
F : (0674) 2362918

Date: 05.01.2023

ZOOPLANKTON MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00200
Type of Sample	Marine Sample (Zooplankton)
Sampling Location	S1:Dhanra River Mouth S3:Liquid/Gas/Cyrogenic Borth 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	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
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 (23 rd Edition) 10200
Analysis Result			
S-1	Surface Water	None	None
	Bottom water	None	None
S-2	Surface Water	None	None
	Bottom water	1600	5 Daphnia
S-3	Surface Water	None	None
	Bottom water	2000	2 Daphnia
S-4	Surface Water	None	None
	Bottom water	None	None
S-5	Surface Water	None	None
	Bottom water	None	None
S-6	Surface Water	None	None
	Bottom water	None	None
S-7	Surface Water	None	None
	Bottom water	None	None

Prepared By - *S. Kango*

Checked By - *A.K. Rath*



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

T : (0674) 2362918, 2360917
 F : (0674) 2362918

Date: 05.01.2023

MICROBIOLOGICAL MONITORING REPORT

Client Name & Address		M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha							
Work Order No.		4802017684							
Reference No.		MSKGL/ED/2022-23/00200							
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 Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island							
Date of Sampling		27.12.2022							
Date of Analysis		27.12.2022 to 04.01.2023							
Sampling Done by		Mr. Soumya 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 5 th Edn	APHA 9221 E	APHA 9221 E	APHA 9221 F	IS 5887(Part-II)	IS 5887(Part-III)	IS 5887(Part-VII)	IS 5887(Part-VI)	
Analysis Result									
S-1	Surface Water	80.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	78.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-2	Surface Water	110.0	6.4	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	196.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-3	Surface Water	120.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	147.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-4	Surface Water	128.0	<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-5	Surface Water	57.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	48.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-6	Surface Water	101.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	86.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-7	Surface Water	198.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	40.0	5.2	<1.8	<1.8	<1.0	Absent	Absent	Absent

Prepared By - *S. Kango*



Checked By - *A. K. Rath*

Date: 05.01.2023

PRIMARY PRODUCTIVITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00200
Type of Sample	Marine Sample (Productivity)
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
Sampling Done by	Mr. Soumya Ranjan Ghadai

Sl. No.	Monitoring Location		Gross Primary productivity (O ₂ mg/L/day)	Net Primary productivity (O ₂ mg/L/day)
1	S1:Dhamra River Mouth	Surface Water	1.7	0.4
		Bottom water	2.4	1.9
2	S2:Dry Bulk Cargo Berth Face	Surface Water	2.6	1.2
		Bottom water	1.4	0.3
3	S3:Liquid/Gas/Cryogenic Berth Face	Surface Water	2.9	1.8
		Bottom water	1.6	0.2
4	S4:Along Channel at 1Km	Surface Water	2.8	1.6
		Bottom water	1.3	0.1
5	S5:Along Channel at 5Km	Surface Water	2.5	1.7
		Bottom water	1.9	0.8
6	S6: Along Channel at 10Km	Surface Water	2.2	1.1
		Bottom water	1.7	0.5
7	S7:Near Kanika Island	Surface Water	2.4	1.0
		Bottom water	1.9	0.1

Prepared By - *S. Ranjan*

Checked By - *A.K. Rath*



PHYTO BENTHOS MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00100
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	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
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	1387	150	6	0.4781	Copepods
	Bottom water	2544	204	8	1.7324	N.longsigma
S-2	Surface Water	2128	247	7	1.1274	Ctenophora,
	Bottom water	1740	180	10	1.5215	Ditylum
S-3	Surface Water	1287	127	11	0.7809	Ctenophora, Ditylum,
	Bottom water	1774	136	10	0.4215	Podasira
S-4	Surface Water	2243	250	12	0.7742	Ditylum, N.longsigma
	Bottom water	1967	182	9	0.6392	Ditylum, Echinodermata
S-5	Surface Water	1227	201	7	1.4662	Podasira, Copepods
	Bottom water	2080	263	20	1.5513	Ditylum, Echinodermata
S-6	Surface Water	2645	321	23	2.2301	Podasira, Copepods
	Bottom water	1845	159	7	0.9962	Ctenophora, Podasira
S-7	Surface Water	1370	110	6	0.4324	Ditylum, Podasira
	Bottom water	1300	179	12	0.8207	Podasira N.longsigma

Prepared By - *S. K. Ganguly*



Checked By - *A. K. Reddy*

Mitra S. K. Private Limited

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: US1909WB1956PTC023037]



T : (0674) 2362916, 2360917
F : (0674) 2362918

Date: 05.01.2023

TOTAL FAUNA MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802017684
Reference No.	MSKGL/ED/2022-23/00200
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 Chanel at 5Km S6: Along Channel at 10Km S7:Near Kanika Island
Date of Sampling	27.12.2022
Date of Analysis	27.12.2022 to 04.01.2023
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 m ³
Testing Method	APHA 10700	APHA 10700	APHA 10700	APHA 10700
Analysis Result				
S-1	Surface Water	Annelida, Mollusca Plychaeta-30,Bivalvia-10	48	135
	Bottom water	Annelida, Mollusca Plychaeta-52,Bivalvia-14	20	110
S-2	Surface Water	Annelida, Mollusca Plychaeta-63,Bivalvia-09	44	147
	Bottom water	Annelida, Mollusca Plychaeta-59,Bivalvia-20	92	270
S-3	Surface Water	Anthropoda, Annelida Plychaeta-92,Bivalvia-39	154	296
	Bottom water	Annelida, Mollusca Plychaeta-28,Bivalvia-25	70	238
S-4	Surface Water	Annelida, Mollusca Plychaeta-46,Bivalvia-36	187	410
	Bottom water	Annelida, Mollusca Plychaeta-38,Bivalvia-07	60	180
S-5	Surface Water	Annelida, Mollusca Plychaeta-60,Bivalvia-16	148	350
	Bottom water	Annelida, Mollusca Plychaeta-96,Bivalvia-27	127	293
S-6	Surface Water	Anthropoda, Annelida Malagostraca-40,Pelecypoda-29	159	357
	Bottom water	Annelida, Mollusca Plychaeta-90,Gastropoda-51	167	487
S-7	Surface Water	Anthropoda, Annelida Malagostraca-20,Pelecypoda-11	79	162
	Bottom water	Anthropoda, Annelida Plychaeta-38,Gastropoda-15	70	380

Prepared By -

S. K. Ghadai



Checked By- *A. K. Lahy*

N-5/100, Ground Floor
IRC Village, Nayapali
Bhubaneswar - 751015
(CIN: U51909WB1956PTC023037)

T : (0674) 2362916, 2360917
F : (0674) 2362918

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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00100
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 14.12.2022

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rfm:2011	7.65
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rfm:2006	2147.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rfm:2015	0.80
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	141.0
5.	Moisture content	%	Lab Method	20.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	4347.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	288.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	8.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	164.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	234.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2054.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	175.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	10.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	38.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	20.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	150.0

Ref. No. BBS/340

Date- 05.01.2023

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	1664.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	13.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Riffm:2014	440.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	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/1/36A	35.0
27.	Silt	%	TPM/MSK/P&E/1/36A	20.0
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.	1444
2.	Total count (Phytobenthos)	50 mg wet sediment	250
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	----	1.72
5.	Major Species (phytobenthos)	----	<i>Coscinodiscus sp., Biddulphia mobilensis</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-40, Bivalvia-22
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m ³	152

Report Prepared by:

S. K. Ranga



For Mitra S.K. Private Limited

A.K. Rath
Authorized Signatory

T : (0674) 2362916, 2360917
F : (0674) 2362918

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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00101
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 14.12.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.52
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2427.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.60
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	110.0
5.	Moisture content	%	Lab Method	16.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	5278.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	1778.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	14.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	214.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	507.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	4058.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	160.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	12.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	31.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	16.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	254.0

Ref. No. BBS/341

Date- 05.01.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	11.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1475.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	12.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfim:2014	410.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	367.0.
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	35.0
27.	Silt	%	TPM/MSK/P&E/1/36A	32.0
28.	Clay	None	TPM/MSK/P&E/1/36A	28.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

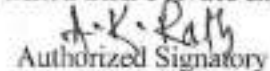
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1521
2.	Total count (Phytobenthos)	50 mg wet sediment	347
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	1.74
5.	Major Species (phytobenthos)	----	<i>Coccomodiscus</i> sp
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-40,Bivalvia-22
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m ³	140

Report Prepared by:



For Mitra S.K. Private Limited



Authorized Signatory


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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00102
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 27.12.2022

ANALYSIS RESULT

<u>Sl No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.62
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2570.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.21
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	52.0
5.	Moisture content	%	Lab Method	20.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1477.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	133.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	10.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	18.0
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	1208.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	152.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	26.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	23.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	20.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	165.0

Ref. No. BBS/342

Date- 05.01.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	10.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	2054.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	6.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); R/fm:2014	312.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	220.0
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	32.0
28.	Clay	None	TPM/MSK/P&E/1/36A	28.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1722
2.	Total count (Phytobenthos)	50 mg wet sediment	290
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	1.49
5.	Major Species (phytobenthos)	----	<i>Biddulphia mobilensis, Spirulina aeruginosa</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-60, Bivalvia-25
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m ³	220

S. Kango
Report Prepared by:



For Mitra S.K. Private Limited

A.K. Rathi
Authorized Signatory

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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00103
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 27.12.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.52
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3584.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.72
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	46.0
5.	Moisture content	%	Lab Method	25.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	4007.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	115.0
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	9.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	14.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1287.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	196.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	14.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	15.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	26.0
17.	Manganese (as Mn)	ug/kg	EPA 6010D	140.0

Ref. No. BBS/343

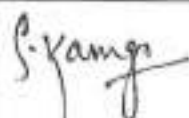
Date- 05.01.2023

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	1725.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	32.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfin:2014	217.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	220.0
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	35.0
28.	Clay	None	TPM/MSK/P&E/1/36A	25.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay

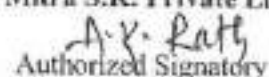
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1300
2.	Total count (Phytobenthos)	50 mg wet sediment	329
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	---	2.86
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Nitzschia distans</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-90,Bivalvia-25
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m ³	180

Report Prepared by:




For Mitra S.K. Private Limited



 Authorized Signatory

T : (0674) 2362916, 2360917
F : (0674) 2362918

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 : 05.01.2022
Sample No. : MSKGL/ED/2022-23/12/00104
Sample Description : Sea Sediment
Sampling Location : Dhamra River Mouth
Date of sampling : 27.12.2022

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	8215.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.6
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	34.0
5.	Moisture content	%	Lab Method	20.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1548.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	401.0
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	2.6
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	5.4
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2045.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	410.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	4.8
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.2
16.	Zinc (as Zn)	mg/kg	EPA 6010D	8.7
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/344

Date- 05.01.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	7.1
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	7.4
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); Rflm:2014	9.0
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	30.0
27.	Silt	%	TPM/MSK/P&E/1/36A	37.0
28.	Clay	None	TPM/MSK/P&E/1/36A	33.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

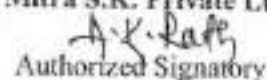
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1840
2.	Total count (Phytobenthos)	50 mg wet sediment	196
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	0.8114
5.	Major Species (phytobenthos)	----	<i>Coccolodiscuss, Pleurosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-60, Bivalvia-24
8.	Total no. of species encountered (Fauna)	Nos.	20
9.	Total fauna (Fauna)	per m ³	180

Report Prepared by:



For Mitra S.K. Private Limited


 Authorized Signatory


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

T: (0674) 2362916, 2360917
 F: (0674) 2362918

TEST REPORT

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

Report No. : BBS/345
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00105
Sample Description : Sea Sediment
Sampling Location : Dry Bulk Cargo Berth Face
Date of sampling : 27.12.2022

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
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	2387.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	1.6
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	15.0
5.	Moisture content	%	Lab Method	32.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2149.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	270.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	6.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	10.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	6.8
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2247.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	312.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	2.8
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.3
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.2
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/345

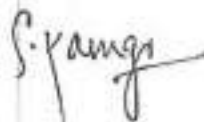
Date- 05.01.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	3.3
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	9.8
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); Rffm:2014	10.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	8.6
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	30.0
28.	Clay	None	TPM/MSK/P&E/1/36A	28.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

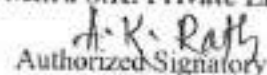
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1904
2.	Total count (Phytobenthos)	50 mg wet sediment	284
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	---	0.7285
5.	Major Species (phytobenthos)	---	<i>Navicula, Coscinodiscus,</i>
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.	20
9.	Total fauna (Fauna)	per m ³	219

Report Prepared by:



For Mitra S.K. Private Limited


 Authorized Signatory


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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00106
Sample Description : Sea Sediment
Sampling Location : Liquid/Gas/Cryogenic Berth
Face
Date of sampling : 27.12.2022

ANALYSIS RESULT

Sl.No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rfmr:2011	7.88
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rfmr:2006	3652.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rfmr:2015	3.1
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	44.0
5.	Moisture content	%	Lab Method	26.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1348.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	685.0
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	4.6
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1544.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	238.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	3.6
15.	Nickel (as Ni)	mg/kg	EPA 6010D	4.5
16.	Zinc (as Zn)	mg/kg	EPA 6010D	9.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/346

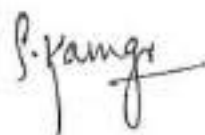
Date- 05.01.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	8.9
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	4.5
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.9
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfin:2014	8.7
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.2
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	34.0
27.	Silt	%	TPM/MSK/P&E/1/36A	26.0
28.	Clay	None	TPM/MSK/P&E/1/36A	40.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

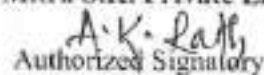
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1700
2.	Total count (Phytobenthos)	50 mg wet sediment	237
3.	No of species (Phytobenthos)	Nos.	4
4.	Diversity index (Phytobenthos)	----	0.6550
5.	Major Species (phytobenthos)	----	<i>Bidulphia, Pleurosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-62, Bivalvia-24
8.	Total no. of species encountered (Fauna)	Nos.	30
9.	Total fauna (Fauna)	per m ³	242

Report Prepared by:



For Mitra S.K. Private Limited


 Authorized Signatory


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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00107
Sample Description : Sea Sediment
Sampling Location : Along Channel at 1 km
Date of sampling : 27.12.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.74
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	4061.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	2.9
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	22.0
5.	Moisture content	%	Lab Method	34.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1786.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	610.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	10.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	6.9
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	25.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2872.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	229.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	1.4
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.1
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.7
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/347

Date- 05.01.2023

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), Rflm:2014	12.5
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	44.0
27.	Silt	%	TPM/MSK/P&E/1/36A	26.0
28.	Clay	None	TPM/MSK/P&E/1/36A	30.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1500
2.	Total count (Phytobenthos)	50 mg wet sediment	210
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	---	0.4580
5.	Major Species (phytobenthos)	---	<i>Bidulphia, Gyrosigma</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-59,Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	11
9.	Total fauna (Fauna)	per m ³	230

S. Kangra
Report Prepared by:



For Mitra S.K. Private Limited

A.K. Rath
Authorized Signatory

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

T : (0674) 2362916, 2360917
F : (0674) 2362918

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 : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00108
Sample Description : Sea Sediment
Sampling Location : Along Channel at 5 km
Date of sampling : 27.12.2022

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.84
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	4445.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	2.3
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	52.0
5.	Moisture content	%	Lab Method	34.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	724.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	454.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	4.2
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	18.7
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2874.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	218.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	1.2
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.8
16.	Zinc (as Zn)	mg/kg	EPA 6010D	18.7
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/348

Date- 05.01.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.4
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex II	2.4
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); Rffm:2014	12.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	6.4
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.	Clay	None	TPM/MSK/P&E/1/36A	20.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay

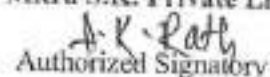
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1870
2.	Total count (Phytobenthos)	50 mg wet sediment	266
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	1.4731
5.	Major Species (phytobenthos)	----	<i>Navicula Gyrosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-60, Bivalvia-30
8.	Total no. of species encountered (Fauna)	Nos.	52
9.	Total fauna (Fauna)	per m ³	170

Report Prepared by:



For Mitra S.K. Private Limited



Authorized Signatory


N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
[CIN: U51909WB1958PTC023037]

T : (0674) 2362916, 2360917
F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/349
Date : 05.01.2023
Sample No. : MSKGL/ED/2022-23/12/00109
Sample Description : Sea Sediment
Sampling Location : Along Channel at 10 km
Date of sampling : 27.12.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.55
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3725.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	6.2
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	36.0
5.	Moisture content	%	Lab Method	30.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1874.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	432.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	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	16.1
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2824.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	1510.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	3.8
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.4
16.	Zinc (as Zn)	mg/kg	EPA 6010D	14.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/349

Date- 05.01.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.84
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	4.02
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	5.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	15.6
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/g dry wt.	1800
2.	Total count (Phytobenthos)	50 mg wet sediment	264
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	----	1.6429
5.	Major Species (phytobenthos)	----	<i>Synedra, Coscinodiscuss sp.</i>
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.	40
9.	Total fauna (Fauna)	per m ³	249

S. K. Singh
Report Prepared by:



For Mitra S.K. Private Limited

A. K. Rath
Authorized Signatory

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

T : (0674) 2362916, 2360917
 F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/350
 Date : 05.01.2023
 Sample No. : MSKGL/ED/2022-23/12/00110
 Sample Description : Sea Sediment
 Sampling Location : Near Kanika Island
 Date of sampling : 27.12.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987; Rffin:2011	7.47
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984; Rffin:2006	3250.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffin:2015	4.2
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	12.0
5.	Moisture content	%	Lab Method	17.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	529.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977, RA 2015	2247.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	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	7.2
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2698.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	201.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	4.2
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.4
16.	Zinc (as Zn)	mg/kg	EPA 6010D	6.1
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/350


Date- 05.01.2023

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.8
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	3.4
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	6.4
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflin:2014	10.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	4.2
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	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

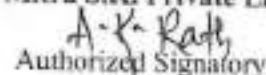
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1874
2.	Total count (Phytobenthos)	50 mg wet sediment	290
3.	No of species (Phytobenthos)	Nos.	14
4.	Diversity index (Phytobenthos)	---	1.6505
5.	Major Species (phytobenthos)	---	<i>Bidulphia, Navicula</i>
6.	Name of Phylum (Fauna)	---	Anthropoda, Annelida
7.	Class & Number of individuals encountered (Fauna)	---	Malagostraca-52, Pelecypoda-14
8.	Total no. of species encountered (Fauna)	Nos.	32
9.	Total fauna (Fauna)	per m ³	342

Report Prepared by:



For Mitra S.K. Private Limited


 Authorized Signatory


MONTHLY ENVIRONMENT MONITORING REPORT

NOVEMBER-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



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

N-5/100, Ground Floor
IRC Village, Nayepalli
Bhubaneswar - 751015
{CIN: U51909WB1958PTC023037}

T : (0674) 2362916, 2360917
F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/507
Date : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/01014
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 05.11.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APIA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.87	7.01
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	60.0	12.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	90.0	8.6
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	280.0	18.5
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	14.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	20.3	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfim:2014	31.8	1.2
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2800.0	200.0

S. Kango
Report Prepared by:



For Mitra S. K. Private Limited

A. W. Rout
Authorized Signatory

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

T : (0674) 2362916, 2360917
F : (0674) 2362918

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 : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/01381
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 27.11.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.68	7.14
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	112.0	11.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	128.0	10.0
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	396.0	26.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	9.4	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	38.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); RfM:2014	46.0	1.9
11.	Faecal Coliform	MPN/100ml	<1000.0	APHA (23 rd Edition) 9221 E	2190.0	147.0

S. K. Kamra
Report Prepared by:



For Mitra S. K. Private Limited

A. C. Rath
Authorized Signatory

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

T : (0674) 2362916, 2360917
 F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/502
Date : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/01012
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 05.11.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.55	7.05
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	94.0	6.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	104.0	7.8
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	232.0	21.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	16.2	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	16.9	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	24.8	1.9
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2300.0	210.0

S. Kango
 Report Prepared by:



For Mitra S. K. Private Limited

Y. U. Raut
 Authorized Signatory

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

T : (0674) 2362916, 2360917

F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/504
Date : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/01379
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 27.11.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.88	7.22
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	150.0	10.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	140.0	8.8
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	380.0	20.6
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	29.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	23.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	37.0	2.6
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1340.0	188.0

S. K. Kamps
Report Prepared by:



For Mitra S. K. Private Limited

A. C. Rath
Authorized Signatory

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

T : (0674) 2382916, 2380917
F : (0674) 2382918

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 : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/01008
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 05.11.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.89	7.14
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	115.0	8.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	140.0	10.6
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	350.0	26.1
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	23.1	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	16.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	27.0	3.6
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1800.0	110.0

S. Kamra
Report Prepared by:



For Mitra S. K. Private Limited

A. U. Routh
Authorized Signatory

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

T : (0674) 2362916, 2360917
F : (0674) 2362918

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 : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/01375
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 27.11.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.74	7.09
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	90.0	6.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	110.0	7.4
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	290.0	20.6
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	14.6	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	21.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	29.0	3.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1200.0	120.0

S. K. Kanya
Report Prepared by:



For Mitra S. K. Private Limited

A. U. Rath
Authorized Signatory

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 : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/01010
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 05.11.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.59	6.98
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	130.0	4.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	160.0	6.6
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	380.0	18.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	28.7	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	18.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	35.0	2.4
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2900.0	110.0

S. K. Kamra
Report Prepared by:



For Mitra S. K. Private Limited

A. K. Ratha
Authorized Signatory

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 : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/01377
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 27.11.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agrecable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.99	7.11
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	85.0	4.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	92.0	6.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	198.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	13.2	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	21.6	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	33.5	1.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1500.0	98.0

P. Kango
Report Prepared by:



For Mitra S. K. Private Limited
A. U. Routh
Authorized Signatory

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 : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/00101
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 19.11.2022

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.66
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2749.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	6.8
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	252.0
5.	Moisture content	%	Lab Method	20.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2208.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	418.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	147.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	254.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1097.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	174.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	19.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	15.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	26.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	187.0

Ref. No. BBS/517

Date- 03.12.2022

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	3448.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	30.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	435.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	513.0
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	35.0
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	33.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1487
2.	Total count (Phytobenthos)	50 mg wet sediment	269
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	---	1.54
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Spirulina aeruginea</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-62, Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	22
9.	Total fauna (Fauna)	per m ³	230

S. Kango
Report Prepared by:



For Mitra S.K. Private Limited
A. U. Rathi
Authorized Signatory

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 : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/00100
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 19.11.2022

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.01
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2631.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.74
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	276.0
5.	Moisture content	%	Lab Method	26.0
6.	Chloride (as Cl ⁻)	mg/kg	TPM/MSK/P&E/1/10	2450.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	468.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	9.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	94.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	27.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2281.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	441.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	16.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	25.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	22.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	323.0

Ref. No. BBS/516

Date- 03.12.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	6.2
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	3884.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	22.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfm:2014	457.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	368.0
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	32.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	28.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1462
2.	Total count (Phytobenthos)	50 mg wet sediment	265
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	1.59
5.	Major Species (phytobenthos)	----	<i>Biddulphia mobilensis, Nitzschia distans</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-39,Bivalvia-14
8.	Total no. of species encountered (Fauna)	Nos.	12
9.	Total fauna (Fauna)	per m ³	192

S. Kaur
Report Prepared by:



For Mitra S.K. Private Limited
A. K. Rathi
Authorized Signatory

TEST REPORT

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

Report No. : BBS/516
Date : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/00616
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 03.11.2022

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.82
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3241.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.87
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	292.0
5.	Moisture content	%	Lab Method	26.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2334.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	489.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	151.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	60.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2995.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	387.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	12.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	8.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	16.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	374.0

Ref. No. BBS/515

Date- 03.12.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	6.2
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1312.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	18.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	380.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	331.0
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	34.0
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.	1328
2.	Total count (Phytobenthos)	50 mg wet sediment	260
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	---	1.86
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Navicula closterium</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-48, Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	18
9.	Total fauna (Fauna)	per m ³	162

S. K. Rang
Report Prepared by:



For Mitra S.K. Private Limited
V. L. Rath
Authorized Signatory

TEST REPORT

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

Report No. : BBS/515
Date : 03.12.2022
Sample No. : MSKGL/ED/2022-23/11/00615
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 03.11.2022

ANALYSIS RESULT

<u>SL No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.24
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2254.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.64
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	231.0
5.	Moisture content	%	Lab Method	12.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2081.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	484.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	9.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	267.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	304.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1387.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	452.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	15.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	10.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	12.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	234.0

Ref. No. BBS/518

Date- 03.12.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	11.7
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1654.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	18.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	195.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	170.0
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.	Texture	None	TPM/MSK/P&E/1/36A	Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	29.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1741
2.	Total count (Phytobenthos)	50 mg wet sediment	290
3.	No of species (Phytobenthos)	Nos.	12
4.	Diversity index (Phytobenthos)	---	1.72
5.	Major Species (phytobenthos)	---	<i>Gyrosigma sp., Nitzschia distans</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-80, Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	10
9.	Total fauna (Fauna)	per m ³	190

 S. K. Kamra
 Report Prepared by:

 For Mitra S.K. Private Limited
 V. C. Rathi
 Authorized Signatory

Ref: MSKGL/ED/BHU-2022/01140

Date: 03.12.2022

Site Specific Monitored Meteorological Data

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

Sr. No.	Parameters	November.22	
1.	Temperature (°C)	Minimum	19.1
		Maximum	31.6
		Average	26.2
2.	Relative Humidity (%)	Minimum	33.5
		Maximum	99.3
		Average	65.6
3.	Wind Speed (m/s)	Minimum	3.3
		Maximum	91.9
		Average	67.2
4.	Wind Direction (%)	N	6.4
		NNE	14.7
		NE	2.4
		ENE	12.4
		E	5.7
		ESE	3.22
		SE	10.78
		SSE	12.17
		S	5.78
		SSW	4.55
		SW	3.8
		WSW	2.81
		W	4.01
		WNW	6.57
		5.	Rainfall (mm)
Total	107.8		
Minimum Day Wise	0.0		
Maximum Day Wise	26.1		
6.	Ambient Pressure (mm Hg)	Average	0.15
		Minimum	747.8
		Maximum	758.4
		Average	751.7

(Source - Site Specific Data)

Prepared By

S. Kamra

Verified By

A. C. Rout



MONTHLY ENVIRONMENT MONITORING REPORT

OCTOBER- 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



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

N-6/100, Ground Floor
 IRC Village, Nayapalli
 Bhubaneswar - 751015
 [CIN: U51909WB1956PTC023037]

T : (0674) 2362916, 2360917
 F : (0674) 2362915

TEST REPORT

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

Report No. : BBS/608
Date : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00970
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 15.10.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.68	7.14
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	146.0	7.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	128.0	7.0
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	344.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	9.9	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	45.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfim:2014	58.0	1.2
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2900.0	98.0

S. K. Singh
 Report Prepared by:



For Mitra S.K. Private Limited

[Signature]
 Authorized Signatory

TEST REPORT

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

Report No. : BBS/607
Date : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00419
Sample Description : EFFLUENT WATER
Sampling Location : STP 150KLD
Date of sampling : 01.10.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.60	6.89
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	78.0	10.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	114.0	4.6
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	260.0	12.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	6.1	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	24.9	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	36.5	0.97
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	3000.0	190.0

S. K. Kango
Report Prepared by:



For Mitra S. K. Private Limited

[Signature]
Authorized Signatory

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

T : (0674) 2362916, 2360917

F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/602
Date : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00417
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 01.10.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	---	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	---	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.55	7.05
4.	Appearance	---	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	84.0	4.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	98.0	5.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	220.0	24.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	5.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH ₃ -F 2017	18.2	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	25.6	1.7
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	2300.0	330.0

S. Kango
Report Prepared by:



For Mitra S. K. Private Limited

[Signature]
Authorized Signatory

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 : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00968
Sample Description : EFFLUENT WATER
Sampling Location : STP 140KLD
Date of sampling : 15.10.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.55	6.78
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	204.0	8.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	172.0	6.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	408.0	20.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	12.0	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	19.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	31.0	2.5
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	970.0	166.0

S. K. Singh
Report Prepared by:



For Mitra S. K. Private Limited

[Signature]
Authorized Signatory

TEST REPORT

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

Report No. : BBS/601
Date : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00413
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 01.10.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.58	7.26
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	101.0	6.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	124.0	8.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	240.0	24.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	6.5	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	14.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	23.0	2.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1400.0	120.0

S. K. Kamra
Report prepared by:



For Mitra S. K. Private Limited
[Signature]
Authorized Signatory

TEST REPORT

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

Report No. : BBS/603
Date : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00964
Sample Description : EFFLUENT WATER
Sampling Location : STP 15 KLD
Date of sampling : 15.10.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.56	6.88
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	98.0	6.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	122.0	7.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	260.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	8.9	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH ₃ -F 2017	19.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rfim:2014	25.0	2.8
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1000.0	150.0

S. K. Kango
Report Prepared by:



For Mitra S. K. Private Limited

[Signature]
Authorized Signatory

N-5/100, Ground Floor
IRC Village, Nayapalli
Bhubaneswar - 751015
{CIN: US1909WB1956PTC023037}

T : (0674) 2362918, 2360917
F : (0674) 2362918

TEST REPORT

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

Report No. : BBS/613
Date : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00415
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 01.10.2022

ANALYSIS RESULT

SL. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 – 9.0	APHA (23 rd Edition) 4500 H-B	6.55	6.78
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	142.0	<2.5
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	130.0	6.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	310.0	16.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	9.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH3-F 2017	16.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	31.0	2.1
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1700.0	210.0

S. Kango
Report Prepared by:



For Mitra S. K. Private Limited

[Signature]
Authorized Signatory

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 : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00966
Sample Description : EFFLUENT WATER
Sampling Location : STP 25KLD
Date of sampling : 15.10.2022

ANALYSIS RESULT

Sl. No.	Test Parameters	Units	Limit	Test Specification	Result	
					Inlet	Outlet
1.	Colour	Hazen	--	APHA (23 rd Edition) 2120B 2017	Blackish	Colourless
2.	Odour	----	--	APHA (23 rd Edition) 2150B	Disagreeable	Agreeable
3.	pH value at 26°C	----	6.5 - 9.0	APHA (23 rd Edition) 4500 H-B	6.91	7.02
4.	Appearance	----	--	Lab Method	Turbid	Clear
5.	TSS	mg/l	<20.0	APHA (23 rd Edition) 2540D	81.0	5.0
6.	BOD	mg/l	<10.0	APHA (23 rd Edition) 5210B 2017	84.0	4.2
7.	COD	mg/l	<50.0	APHA (23 rd Edition) 5220B 2017	234.0	12.0
8.	Oil & Grease	mg/l	<10.0	APHA (23 rd Edition) 5220B 2017	5.8	<1.4
9.	Ammonical Nitrogen	mg/l	<5.0	APHA (23 rd Edition) 4500-NH ₃ -F 2017	30.0	<0.1
10.	Total Nitrogen (as N)	mg/l	<10.0	IS 14684 (1999); Rffm:2014	44.0	1.6
11.	Faecal Coliform	MPN/ 100ml	<1000.0	APHA (23 rd Edition) 9221 E	1800.0	110.0

S. Kango
Report Prepared by:



For Mitra S. K. Private Limited

[Signature]
Authorized Signatory

TEST REPORT

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

Report No. : BBS/615
Date : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00715
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 09.10.2022

ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.35
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2459.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.72
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	228.0
5.	Moisture content	%	Lab Method	10.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2151.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	497.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	12.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	280.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	314.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1541.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	480.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	17.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	11.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	15.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	256.0

Ref. No. BBS/615

Date- 04.11.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	6.4
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1475.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	20.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	394.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	347.0
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	40.0
28.	Texture	None	TPM/MSK/P&E/1/36A	Clay Loam
29.	Clay	%	TPM/MSK/P&E/1/36A	28.0

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1249
2.	Total count (Phytobenthos)	50 mg wet sediment	266
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	---	1.93
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Navicula closterium</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-56,Bivalvia-29
8.	Total no. of species encountered (Fauna)	Nos.	16
9.	Total fauna (Fauna)	per m ³	149

S. Kango
Report Prepared by:



For Mitra S.K. Private Limited

(Signature)
Authorized Signatory

TEST REPORT

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

Report No. : BBS/616
Date : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00716
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 09.10.2022

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.66
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	3963.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.91
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	288.0
5.	Moisture content	%	Lab Method	32.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2641.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	521.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	169.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	65.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	3089.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	401.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	14.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	10.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	21.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	396.0

Ref. No. BBS/616

Date- 04.11.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	5.9
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	4214.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	25.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	462.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	431.0
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.	1402
2.	Total count (Phytobenthos)	50 mg wet sediment	278
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	1.64
5.	Major Species (phytobenthos)	----	<i>Biddulphia mobilensis, Nitzschia distans</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-44, Bivalvia-19
8.	Total no. of species encountered (Fauna)	Nos.	14
9.	Total fauna (Fauna)	per m ³	180

S. K. Kango
Report Prepared by:



For Mitra S.K. Private Limited
Authorized Signatory

TEST REPORT

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

Report No. : BBS/617
Date : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00500
Sample Description : Sea Sediment
Sampling Location : Dredging Disposal Site
Date of sampling : 25.10.2022

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffin:2011	6.89
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffin:2006	3700.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffin:2015	0.74
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	254.0
5.	Moisture content	%	Lab Method	26.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2876.0
7.	Sulphate (as SO4)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	521.0
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	7.4
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	101.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	36.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2996.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	502.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	18.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	23.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	21.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	327.0

Ref. No. BBS/617

Date- 04.11.2022

18.	Lead (as Pb)	mg/kg	EPA 6010D	12.0
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	3551.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	34.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	444.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	526.0
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	38.0
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.	1560
2.	Total count (Phytobenthos)	50 mg wet sediment	290
3.	No of species (Phytobenthos)	Nos.	12
4.	Diversity index (Phytobenthos)	---	1.98
5.	Major Species (phytobenthos)	---	<i>Biddulphia mobilensis, Spirulina aeruginea</i>
6.	Name of Phylum (Fauna)	---	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Polychaeta-74, Bivalvia-28
8.	Total no. of species encountered (Fauna)	Nos.	28
9.	Total fauna (Fauna)	per m ³	247

S. K. Singh
Report Prepared by:



For Mitra S.K. Private Limited
Authorized Signatory

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

T : (0674) 2362916, 2360917
F : (0674) 2362918

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 : 04.11.2022
Sample No. : MSKGL/ED/2022-23/10/00501
Sample Description : Sea Sediment
Sampling Location : Dredging Area
Date of sampling : 25.10.2022

ANALYSIS RESULT

<u>Sl. No.</u>	<u>Parameters</u>	<u>Unit</u>	<u>Test Method</u>	<u>Result</u>
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.94
2.	Electrical Conductivity	us/cm	IS 3025 (Part 14)-1984;Rffm:2006	2991.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	4.8
4.	Turbidity	N.T.U	APHA (23 rd Edition) 2130B	240
5.	Moisture content	%	Lab Method	22.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	2480.0
7.	Sulphate (as SO ₄)	mg/kg	IS 2720 (Part 27) 1977,RA 2015	431.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO ₄)	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	152.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	269.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1147.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	184.0
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	21.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	191.0


Ref. No. BBS/618

Date- 04.11.2022


18.	Lead (as Pb)	mg/kg	EPA 6010D	10.9
19.	Boron (as B)	mg/kg	IS 13428- 2005,Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1780.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	17.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	187.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	162.0
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	35.0
27.	Silt	%	TPM/MSK/P&E/1/36A	40.0
28.	Texture	None	TPM/MSK/P&E/1/36A	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.	1600
2.	Total count (Phytobenthos)	50 mg wet sediment	310
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	----	1.69
5.	Major Species (phytobenthos)	----	<i>Gyrosigma</i> sp., <i>Nitzschia distans</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Ptychacta-78, Bivalvia-16
8.	Total no. of species encountered (Fauna)	Nos.	14
9.	Total fauna (Fauna)	per m ³	188

Report Prepared by: 

For Mitra S.K. Private Limited


 Authorized Signatory


Ref: MSKGL/ED/BHU-2022/00800

Date: 01.11.2022

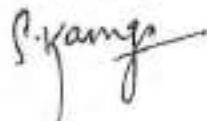
Site Specific Monitored Meteorological Data

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

Sr. No.	Parameters	October.22	
1.	Temperature (°C)	Minimum	21.8
		Maximum	35.9
		Average	28.6
2.	Relative Humidity (%)	Minimum	32.3
		Maximum	87.2
		Average	65.4
3.	Wind Speed (m/s)	Minimum	0.0
		Maximum	24.2
		Average	65.4
4.	Wind Direction (%)	N	4.7
		NNE	18.9
		NE	2.8
		ENE	1.3
		E	6.22
		ESE	4.78
		SE	11.23
		SSE	3.22
		S	7.88
		SSW	6.55
		SW	2.48
		WSW	3.21
		W	17.22
		WNW	7.63
	CALM	1.88	
5.	Rainfall (mm)	Total	70.2
		Minimum Day Wise	0.0
		Maximum Day Wise	9.6
		Average	0.09
6.	Ambient Pressure (mm Hg)	Minimum	746.8
		Maximum	758.7
		Average	752.0

(Source - Site Specific Data)

Prepared By




Verified By



THE DHAMRA PORT COMPANY LIMITED**Environment Management Plan**

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
1	Capital dredging/ Reclamation/ Disposal/ Construction of Approach Trestle/ Berths and other offshore structures such as seawater intake/ marine outfall	<p>Marine water Quality</p> <p>Marine ecology</p>	<p>- Increase in turbidity</p> <p>- Change in marine water quality due to aqueous discharges (oily waste, sanitary wastes) from dredgers, barges and workboats.</p> <p>- Spill of Bentonite Clay during pile driving.</p> <p>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:</p> <p>- Decrease in DO levels.</p> <p>- Increase in noise levels.</p> <p>- Disturbance to benthic communities.</p> <p>- Changes in species diversity and density in areas adjoining dredging site.</p> <p>- Smothering or blanketing of sub-tidal communities.</p>	<p>- Check turbidity levels with baseline levels as reference during entire monitoring programme</p> <p>- Dredge Management Programme.</p> <p>- Discharge of waste into sea will be prohibited.</p> <p>- Oil Spill control measures will be adopted.</p> <p>- Ensure that slop tanks are provided to barges/ workboats for collection of liquid/ solid waste.</p> <p>- Recirculation/Reuse of Bentonite clay and adoption of better construction methods to minimize the spill on marine environment.</p> <p>- Adoption Standard Reclamation methods with containment system to retain the solid inside the reclamation area.</p> <p>- Disposal of unused Dredged material at the identified offshore disposal area only.</p> <p>- Marine environmental monitoring as per environmental monitoring programme.</p>	<p>- 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.</p> <p>- Dredging is being carried out in the areas identified and approved as a part of Revised Master plan.</p> <p>- No waste is being discharged into sea.</p> <p>- Oil Spill control measures are in place.</p> <p>- Wastes collected from ship are being disposed in line to the 5R's principle.</p> <p>- Spill of bentonite clay during construction to marine environment is avoided.</p> <p>- Containment is provided around the reclamation area.</p> <p>- The unused dredged material is being disposed of in the identified areas approved as a part of Revised Master plan.</p> <p>- The marine environmental monitoring is being carried out by engaging MOEF&CC approved laboratory. The details of</p>

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
		Mangrove area	<ul style="list-style-type: none"> - Impact on 9ha mangrove near the southern boundary. - Impact on mangroves near northern boundary. - Impact on mangroves at Kanika Island. 	<ul style="list-style-type: none"> - 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. 	<p>Marine Water quality monitoring reports for the period of Oct'22 to Mar'23 is enclosed as Annexure I.</p> <ul style="list-style-type: none"> - 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. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				<ul style="list-style-type: none"> - Awareness will be imparted to workers in the port about the importance of mangroves and their conservation. 	<ul style="list-style-type: none"> - Noted and is being complied.
		Impact on turtle/Other Macro Fauna	<ul style="list-style-type: none"> - Accidental take during dredging. - Light Glare on Nesting 	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - Noted and the same is being complied.
		Fishermen and fishing villages	<ul style="list-style-type: none"> - 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 east. Fishing is being carried out at deep sea. Therefore, significant impact on fishing is not envisaged. 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - Noted and the same is being complied.
2	Materials transport and construction activities.	Air Quality	<ul style="list-style-type: none"> - Exhaust emissions from vehicles. - Windblown dust during material movement. 	<ul style="list-style-type: none"> - To reduce impacts from exhausts, emission control norms will be enforced /adhered. 	<p>Complied.</p> <p>As a part of existing operation, air pollution mitigation measures are being adopted.</p>

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
			<ul style="list-style-type: none"> - Fugitive dust during construction material unloading. - Dust suspension during site preparation, construction. - Emissions from DG Sets. 	<ul style="list-style-type: none"> - 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	<p>Noise from following activities</p> <ul style="list-style-type: none"> - Vehicles transporting construction material. - Diesel run engines of construction machinery and dredgers - Pile driving activities during construction of Approach trestle/cargo berths etc., 	<ul style="list-style-type: none"> - 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 	<p>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.</p>

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				<p>standards for source noise levels, will be used.</p> <ul style="list-style-type: none"> - 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.	<ul style="list-style-type: none"> - Impact to natural flow of runoff due to reclamation and change of drainage course. 	<ul style="list-style-type: none"> - 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. NO.	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 thorny 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. NO.	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	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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. NO.	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	<ul style="list-style-type: none"> - Impacts due to disposal of solid waste on ground 	<ul style="list-style-type: none"> - 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. 	<p>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.</p> <p>During the period of Oct’22 to Mar’23, a total quantity of 204 MT of solid waste has been handled in line with the 5R concept.</p> <p>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.</p>
5	Handling of hazardous wastes	Human safety and property/ Environment Loss	<ul style="list-style-type: none"> - Fire accidents due to hazardous material handling. - Impact on Terrestrial and Marine Environment. 	<ul style="list-style-type: none"> - 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. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Impacts to the surface water body 	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Emissions from loading/unloading equipment, DG sets, vehicular dust emissions, fugitive emissions from storage areas, Emissions from vessels visiting Dhamra 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - Noted and being complied. - Handling of cargo is being done by ship loader/unloaders. - Cargo loading is being done through silos.

Sl. NO.	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.,		<p>Port, Vehicular emissions due to cargo transport, emissions from LNG/LPG regasification process, spillage of cargo etc.,</p> <ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Due to equipment handling and vehicular movement. - Ship unloading operations. - Due to Regasification Process and equipment operation. 	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				<ul style="list-style-type: none"> - 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. 	<p>Besides, DPCL has participated with PWD for maintenance and improvement of the main service road to Dhamra and has shared the cost of development.</p> <p>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.</p> <p>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.</p> <p>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.</p>
		Fishermen and fishing villages	<ul style="list-style-type: none"> - Local Fishermen approach to sea. - Fishing harbour is located in Dhamra River at 6.5 km southwest boundary of the port. The fishing boats 	<ul style="list-style-type: none"> - 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. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
			<p>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.</p>	<p>activities is being done and will be continued.</p> <ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - 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. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				<p>mathematical model studies which will ensures attainment of ambient conditions (within 600 m) in the harbour area.</p> <ul style="list-style-type: none"> - Marine Water Quality monitoring is proposed as Part of Environmental Monitoring programme. 	<ul style="list-style-type: none"> - 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 Oct'22 to Mar'23 is enclosed as Annexure I.
3	Cargo and Oil Spills (Accidental)	Marine water quality and ecology	<ul style="list-style-type: none"> - Change in marine water quality 	<ul style="list-style-type: none"> - 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. 	<p>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 14.03.2023.</p>
4	Maintenance dredging	Marine water quality/Marine Ecology	<ul style="list-style-type: none"> - Increase in turbidity - Decrease in DO levels 	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - Noted and is being complied.

Sl. NO.	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	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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. 	<p>Noted.</p> <ul style="list-style-type: none"> - 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. NO.	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			<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Impact due to disposal of solid waste on ground 	<ul style="list-style-type: none"> - 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 Converter 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. 	<p>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.</p> <p>During the reported period, a total quantity of 204 MT of solid waste has been handled in line with the 5R concept.</p> <p>Compost is being generated from bio-degradable waste using Organic Waste Converter and the same is used as manure in greenbelt/gardens.</p> <p>We have color coded bins for segregating different category of solid waste. Recyclable wastes are handed over to authorized recyclers.</p>
	Handling of hazardous materials/wastes	Fire accidents due to products handling and other health hazards/ Groundwater and soil contamination	<ul style="list-style-type: none"> - Human life and loss of property. - Impact on Terrestrial and Marine Environment 	<ul style="list-style-type: none"> - 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 	<p>Complied.</p> <p>We have a strict safety regimen with the motto “Safety First”.</p> <p>Safety Observations are mandatory from every department of the port and immediate measures are undertaken to rectify the shortcoming.</p> <p>OHSAS Guidelines and MSIHC Guidelines are followed for handling of Hazardous</p>

Sl. NO.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
				<p>varnishes etc., will be stored as per the prescribed/approved safety norms.</p> <ul style="list-style-type: none"> - 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. 	<p>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.</p> <ul style="list-style-type: none"> - Hazardous wastes are being disposed through approved OSPCB vendors.
	Presence of Reclaimed back up area or Bund	Shoreline Changes Change in Hydrodynamics	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - 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. 	<p>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.</p>

Sl. NO.	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: Oct-22 to Mar-23

Sl.No	Activity/Category	Expenditure (In Lakhs)
01	Construction of new drains and drain cleaning	8.44
02	Environmental Monitoring Services	16.11
03	Hazardous and Solid waste management & disposal	12.19
04	Treatment and Disposal of Bio-Medical Waste	1.92
05	Plastic Waste Management & Disposal	3.06
06	Inside Port plantation and maintenance	1.84
07	O&M of Sewage Treatment Plant (STP)	19.99
08	Port housekeeping (Environment)	17.13
09	Port housekeeping (Operation)	418.00
10	Housekeeping (Railway)	6.60
11	Housekeeping (Engineering Services)	123.48
12	Mechanized Sweeping Machine	75.83
13	O & M of OWC machine	8.98
14	Firefighting Expenses	52.28
15	O & M of Mist Cannon	5.68
16	Sewage Management	15.17
17	O & M of Dust Suppression System	2.41
	Total	789.11

ANNEXURE-IV

THE DHAMRA PORT COMPANY LIMITED								
CSR WORK DETAILS								
Oct'22 to Mar'23								
EDUCATION		Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Total In Lakhs (Oct'22 - Mar'23)
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,	0.37	0.41	0.68	12.28	12.28	0.00	26.02
2	LEAP project - ThinkZone	2.50	14.94	0.20	3.08	0.00	2.48	23.20
3	Support to Quality Education (Setting up School Library in High Schools and ME schools) Programme :	0.00	0.20	0.00	0.00	0.00	0.00	0.20
4	GURU SAMMAN- Felicitation of retired teachers who have immensely contributed towards the Education upliftment of Bhadrak & dhamra region.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Support to School (in bridging the gap of basic facilities in schools) Programme :	29.00	0.00	0.00	0.00	0.00	0.00	29.00
6	Learning Enrichment program for Teachers	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,	25.60	36.96	34.08	25.76	30.30	42.30	195.00
10	Udaan - Young & adolescent Students get to visit the Adani Dhamra Port for a knowledge based experience about the Port and the activities of Adani Foundation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		57.47	52.51	34.96	41.12	42.58	44.78	273.42
COMMUNITY HEALTH								
1	Wellness Centre- Medicines for free distribution to community at the health centre and other activities	11.53	1.63	20.69	33.54	0.55	4.45	72.39
2	MHCU Service - 2 Mobile Health Care Units are catering door step helath service to the villages in and around 03 blocks of Bhadrak District i.e. Chandbali, Tihidi & Bhadrak Community Health initiative by iKure	0.00	29.69	0.00	14.76	1.69	26.76	72.90
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	1.70	0.00	0.00	8.86	10.56
4	Blood Donation Camp	0.00	0.00	0.00	0.00	0.00	0.78	0.78
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
		11.53	31.32	22.39	48.30	2.24	40.85	156.63
SUSTAINABLE LIVELIHOOD								
1	Support to Women SHG	0.00	0.00	0.50	1.00	2.00	4.00	7.50
2	Farmers' group initiative	9.00	1.00	7.50	1.50	3.50	1.75	24.25
3	Livestock Care	46.07	1.17	1.19	1.19	19.01	19.01	87.64
4	Disaster Mitigation- Calamity Redressal	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Promoting Rural Sports	0.00	1.00	5.87	1.50	5.17	5.17	18.71
6	Aahar	0.00	28.08	0.00	0.00	0.00	0.00	28.08
7	Skill Development	2.11	2.46	2.46	2.46	2.46	2.46	14.41
8	Stakeholder Management	0.15	1.50	2.25	0.00	0.00	0.96	4.86
		57.33	35.21	19.77	7.65	32.14	33.35	185.45
RURAL INFRASTRUCTURE DEVELOPMENT								
1	Village Development Related: Road Infra Support	0.00	0.00	55.14	0.00	52.27	1.07	108.48
2	Drinking Water Facility- Handpump	0.00	20.48	7.43	2.49	0.00	41.19	71.59
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: Play Ground	0.00	0.00	0.00	0.00	0.00	9.49	9.49
6	Mobility cost for Supervision and monitoring for 5 months	0.00	0.00	0.37	0.00	0.00	1.00	1.37
7	Pond Excavation	0.00	0.00	0.00	0.00	0.00	12.23	12.23
8	Village Development Related: High Mast Light Support	0.00	13.17	1.49	0.00	0.00	14.66	29.32
9	Library Support (Library Infrastructure Support at Basudevpur)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Engagement with Different Stakeholders. (SLD) - Renovation 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	33.65	64.43	2.49	52.27	79.64	232.48
GRAND TOTAL		126.33	152.69	141.55	99.56	129.23	198.62	847.98

Five Years Budget for Corporate Environment Responsibility (CER)								
SL. No.	CORE AREA	PROJECT	Budget for 2019 - 2024 (5 years)					Grant Total (In Lakhs)
			2019-20 (In Lakhs)	2020-21 (In Lakhs)	2021-22 (In Lakhs)	2022-23 (In Lakhs)	2023-24 (In Lakhs)	
1	Biodiversity	Mangroves conservation plan	0.00	0.00	0.00	0.00		0.00
		Turtle / other spices Conservation plan	7.56	24.59	61.85	60.40		154.40
		Environment Cell cum School Library	0.00	0.00	0.00	0.00		0.00
		Community & Degraded Forest Patch Plantation	81.40	0.00	77.31	28.25		186.96
		Total of Biodiversity	88.96	24.59	139.16	88.65	0.00	341.36
2	Water Conservation and Water Recharge Projects	Pond Deepening / Pond strengthening	0.00	0.00	0.00	0.00		0.00
		Bore well Recharge Structure	0.00	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		0.00
		Soft Skill Training to Fisherwomen	0.00	0.00	0.00	0.00		0.00
		Life Jacket and Solar Lantern Support	0.00	0.00	0.00	0.00		0.00
		Electrification of Fishing Area	0.00	0.00	0.00	0.00		0.00
		Raising of Plat form	0.00	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		0.00
		Training to SHGs for their capacity building.	0.00	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		0.00
		Fodder Cultivation/Farmer initiatives	0.00	0.00	0.00	0.00		0.00
		Multi Cropping	0.00	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		0.00
		Excavation of Hand Pumps for Drinking water facility	0.00	0.00	0.00	0.00		0.00
		Construction of Community toilet	0.00	0.00	0.00	0.00		0.00
		Development of School Infrastructure	0.00	0.00	0.00	0.00		0.00
		Construction of Mini Stadium	0.00	0.00	0.00	0.00		0.00
		Fixing of High Mast Light	0.00	0.00	0.00	0.00		0.00
		Construction of community library	0.00	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	88.65	0.00	341.36

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 equipped with equipment	
MANPOWER	IMO Level 1		7			
	IMO Level 2		3			
	IMO Level 3		1			
	Other		15			

Plantation / Greenbelt Inside Port

ANNEXURE VII



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

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	CO2-4.5KG-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 TRANSFORMER	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	145
2	Safety Induction Training	155	1774
3	Portable fire Extinguisher training	29	1129
4	Defensive driving training	2	34
5	Toolbox training	636	5567
6	On the Job Safety Awareness	26	275

Fire Crews member:-

SI 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:-

SI 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

