

**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<sup>th</sup> November 2019  
Ref. No. F.No.11-104/2009-1A-III.**

S. No.	Conditions	Compliance Status
<b>A. Specific Conditions:</b>		
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"> <li>• Use of dust suppression system in hopper, conveyor belt and transfer points.</li> <li>• Pre wetting of cargo before tippling in wagon tippler.</li> <li>• Wagon cargo loading by closed silo system.</li> <li>• Covering of outgoing loaded rail wagon at "Wagon covering station".</li> <li>• Regular water sprinkling by tankers.</li> <li>• Rain guns are fixed all around the stack yard for suppression of dust during stacking, reclaiming and during high wind period.</li> <li>• Dust suppression system at wagon tippler area.</li> <li>• Mobile dust buster is also used in stack yard and other areas for controlling fugitive emission.</li> <li>• Use of dust suppression system in conveyor line.</li> <li>• Tarpaulin covering of minerals stored in stack yard.</li> <li>• Use of water mist canon for suppression of fugitive dust emission.</li> <li>• Road cleaning by mechanized and manual means is being carried out on regular basis.</li> <li>• Use of leak proof transporting vehicles for intra transportation of materials.</li> <li>• Limiting the vehicle speed to 20 km/hr to control fugitive dust emission.</li> </ul>

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		<ul style="list-style-type: none"> <li>• Maximum mechanized handling (Loading and unloading) of cargo from ship.</li> <li>• Greenbelt development along the periphery of storage yard /stack yard.</li> <li>• Regular monitoring of Ambient Air Quality at 6 locations is being carried out by NABL accredited laboratory following the prescribed guidelines. All the results were within the prescribed limit (<b>Annexure-IA</b>)</li> <li>• Periodic awareness and training programs are being conducted regularly among employees and workers.</li> </ul>
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.	<p>Complied.</p> <p>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.</p>
VI	Dredging shall not be carried out during the fish breeding season.	<p>Noted and the same is being followed.</p>
VII	Dredging, etc. shall be carried out in the confined manner to reduce the impacts on marine environment including turbidity and turbidity should be monitored (preferably monthly) near Kanika Island during the dredging.	<p>Being complied.</p> <p>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&amp;CC approved laboratory. The details of marine water quality monitoring reports for the period from Oct'23 to Mar'24 is enclosed as <b>Annexure-IB</b>.</p>
VIII	No underwater blasting is permitted.	<p>No underwater blasting is carried out.</p>
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.	<p>Noted and is being complied.</p> <p>As a part of existing operation and maintenance dredging has been carried out. During the period of Oct'23 to Mar'24, total capital dredging was 3235224 cu.M &amp; 3235224 cu.M of dredged material was used for reclamation. Total maintenance dredging was 6068487 cu.M &amp; 6068487 cu.M of dredged material was disposed in the sea. As stipulated in EIA report and discussed in the EAC, dredged materials are disposed inside sea at MOEF&amp;CC approved designated location with (-) 20 m depth. The marine water quality monitoring is being carried out by NABL &amp; MOEF&amp;CC accredited laboratory on a periodical basis. The results conclude that there is no significant impact observed on marine water quality. The monitoring results for the period Oct'23 to Mar'24 is enclosed as <b>Annexure - IB</b>.</p>

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X	Shoreline should not be disturbed due to dumping. Periodical study on shoreline changes shall be conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring report	Noted. Shoreline monitoring study was carried out as a part of Environment Impact Assessment study for Revised Master plan and further, the same will be carried out at regular intervals to check the impact and if required mitigation measures will be carried out.
XI	While carrying out dredging, an independent monitoring shall be carried out by Government Agency/Institute to check the impact and necessary measures shall be taken on priority basis if any adverse impact is observed.	Noted and will be complied. 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 drawl 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 environments is being carried out by NABL & MoEF&CC accredited laboratory. The monitoring results for the period Oct'23 to Mar'24 is enclosed as Annexure – IB.
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 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	Complied. As a part of existing operations, periodic monitoring program covering all seasons on various

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	operation phase of the project. The monitoring should cover various physico-chemical parameters coupled with biological indices such as microbes, plankton, benthos and fishes. Deviations in the parameters shall be addressed with suitable measures to conserve the marine environment and its resources.	aspects of the coastal environments is carried out by NABL & MoEF&CC accredited laboratory. The monitoring results for the period Oct'23 to Mar'24 is enclosed as Annexure – IB.
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"> <li>• Transportation of Coal/Iron ore is done in covered conveyor belt system.</li> <li>• Water sprinkling is being carried out on road on regular basis.</li> <li>• Dust suppression system has been installed in dust prone area to mitigate the fugitive emission.</li> <li>• Dust buster &amp; rain gun system has been deployed in stack yard to mitigate the fugitive emission from the stack yards.</li> <li>• Wagon covering system is being used for covering of all loaded wagons going out of Port premises.</li> <li>• Rain guns and dust buster are being used to sprinkle water on the coal storage regularly to suppress the coal fugitive dust.</li> </ul>
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'23 to Mar '24 is enclosed as Annexure – IB.
XXI	Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution	Noted.

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	which impacts marine life, particularly benthos. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.	Utmost care is being taken to avoid spillage of fuel/engine oil and lubricants from the construction site. In case of any accidental spillage, saw dust or sand 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><b>Noted</b></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 is 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 of ship generated waste. The collected waste is 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 is being done as per the Plastic Waste Management Rules, 2016</p> <p>The E-Waste is sent to 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><b>Noted &amp; is being complied.</b></p> <p>The following initiatives are being taken for conservation of electrical energy:</p> <ol style="list-style-type: none"> <li>1. Use of LED lights in place of conventional lighting system in our Port and Township common areas.</li> <li>2. Use of automatic on/off timers switch in street lightings.</li> <li>3. Use of solar light fitted with LED bulbs.</li> <li>4. Use of translucent sheets in bigger shed for natural lightings during day hours.</li> <li>5. Use of bigger sized glass windows in offices and MCC building for natural lights in day hours.</li> <li>6. Use of central ACs system instead of individual ACs in bigger offices and buildings.</li> <li>7. Use of VFD (variable frequency drive) in operational area for power savings.</li> </ol>

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		8. Roof top solar power plant of 621 KWP capacity is installed.
XXIV	All the recommendations mentioned in the rapid risk assessment report, disaster management plan and safety guidelines shall be implemented.	<p>Noted &amp; will be complied.</p> <p>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 the following measures are being adopted:</p> <p>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.</p>
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.	<p>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 Tier 1 training, two persons have undergone IMO Tier 2 training and one person has undergone IMO Tier 3 training at Port. The last drill was conducted on 11.01. 2024.</p>
XXVI	Necessary arrangement for general safety and occupational health of people should be done in letter and spirit.	<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 being taken to rectify the shortcoming.</p> <p>OHSAS Guidelines and MSIHC 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.</p>
XXVII	All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to the RO, MoEF&CC along with half yearly compliance report	<p>Noted.</p> <p>Environment Management Plan is enclosed as Annexure-II.</p> <p>Rs.6.85 Crore has been spent towards Environment management for the period of Oct'23 to Mar'24 and the detail is enclosed as Annexure – III.</p>

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XXVIII	The effluent generated by desalination plant and FSRU should be released at designated sites as suggested in the EIA report.	<p>Noted.</p> <p>At present, no FSRU &amp; desalination plant has been developed.</p>
XXIX	The company shall draw up and implement Corporate Social Responsibility plan as per the Company's Act of 2013.	<p>Noted</p> <p>The details work carried out under Corporate Social Responsibility plan for the period of Oct'23 to Mar'24 and the details expenses breakup, totaling to Rs. 5.45 Cr, is enclosed as Annexure-IV.</p>
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.	<p>Noted.</p> <p>Annual CER plan is prepared. Budget and expenditure till date is provided in the Annexure-V.</p>

**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).	<p>Noted.</p> <p>Site-specific Conservation Plan &amp; Wildlife Management plan has been prepared and submitted for approval.</p>
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.	<p>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.</p>
III	The project proponent shall obtain the necessary permission from the Central Ground Water	Noted.

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	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 8 nos. of bore wells from CGWA for drawl of ground water. 3 nos. of borewell are operational & ground water drawl approval from GoO for 5nos. of borewells are under progress.
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 the last half yearly compliance report vide our letter no. DPCL/ENV/MOEFCC/2020-113 dated 23.11.2020. However, at present license of NESCo has been transferred to TP North Odisha Distribution Limited (TPNODL), Date of Order-25.03.2021.
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 from Chief Controller of Explosives for storage of 22.00 KL of Petroleum Class-B (License No.-P/EC/OR/14/1587(P237780), Validity- 31.12.2024) & for 20.00+70.00(90.00KL) of Petroleum Class-B (License No.-P/EC/OR/14/2243(P321827), Validity- 31.12.2025). NOC from fire department was 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 <sub>10</sub> and PM <sub>2.5</sub> in reference to PM emission, and SO <sub>2</sub> and NO <sub>x</sub> in reference to SO <sub>2</sub> and NO <sub>x</sub> 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

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		prone areas to mitigate the fugitive emission. Dust buster & rain gun system has been deployed in stack yard to mitigate the fugitive emission from the stack yards.
III	Shrouding shall be carried out in the work site enclosing the dock/proposed facility area. This will act as dust curtain as well achieving zero dust discharge from the site. These curtain or shroud will be immensely effective in restricting disturbance from wind in affecting the dry dock operations, preventing waste dispersion, improving working conditions through provision of shade for the workers.	<p>As a part of existing operation, following pollution control measures are being implemented at site:</p> <ul style="list-style-type: none"> <li>• Road cleaning by mechanized and manual means is carried out on regular basis.</li> <li>• Regular water sprinkling by tankers are also carried out.</li> <li>• Rain guns are fixed all around the stack yard for suppression of dust during stacking, reclaiming and during high wind period.</li> <li>• Pre wetting of cargo before tippling in wagon tippler.</li> <li>• Dust suppression system at wagon tippler area.</li> <li>• Mobile dust buster is also used in stack yard and other areas for controlling the fugitive emission.</li> <li>• Use of dust suppression system in conveyor line</li> <li>• Regular ambient air quality at 6 locations 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 IA).</li> <li>• Periodic awareness and training programs are also organized by Environment department for workers and employees.</li> </ul>
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.	<p>Noted No such activity has been carried out during Oct'23 to Mar'24.</p>
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.	<p>Noted. As a part of existing operation 6 nos. of standby DG Sets of capacity ranging from 62.5 KVA to 200 KVA are in position for emergency backups &amp; uninterrupted power supply to the water supply system and firefighting system.</p>
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	<p>Noted. DPCL has an exclusive rail connectivity for the project and has a proposal for future expansion of rail-road connectivity.</p>

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	<p>project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.</p>	<p>In FY 2023-24, rail track of 12.5 KM length from Dhamra Yard to Bansara has been built. Two lane road of 9.20 KM length from plant to Mantei river Bridge has been built in FY2023-24. 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 &amp; 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 &amp; Dhamra Port. Based on this –</p> <ol style="list-style-type: none"> <li>Both normal traffic + generated traffic (due to proposed expansion) considered for the study.</li> <li>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.</li> </ol> <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. 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.</p>

**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.	The 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.	<p>Noted.</p> <p>DPCL ensuring dredging through TSHD and further regular marine monitoring is carried out to check the level of turbidity.</p> <p>Silt curtain shall be used, when working near sensitive areas.</p>
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	<p>Complied.</p> <p>Vessels are not allowed to discharge the onboard wastewater in estuary/channel. The vessels have</p>

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	be diverted to the proposed Effluent Treatment Plant of the project site.	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 two 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 11.01.2024.
V	The project proponents will draw up and implement a plan for the management of temperature differences between intake waters and discharge waters.	Noted. As of existing operation facility, there is no intake or discharge.
VI	Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life. This shall be prevented by suitable precautions and by providing necessary mechanisms to trap the spillage.	Utmost care is being taken to avoid spillage of fuel/engine oil and lubricants from the construction site. In case of any accidental spillage, saw dust or sand is being used along with absorbent to arrest the spillage. Used oil/waste oil/waste containing oils are handed over to SPCB approved authorized recyclers. Marine water quality & productivity is monitored by MoEF&CC accredited laboratory. There is no adverse impact on water quality and marine productivity in the vicinity.
VII	Total freshwater use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.	Noted. As a part of existing operation, required fresh water is sourced with the permission from Water Resource department, Government of Odisha.
VIII	Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused for horticulture, flushing, backwash, HVAC purposes and dust suppression.	Noted. As a part of existing operation, four numbers of STP of capacity 140 KLD, 150 KLD, 25 KLD and 15 KLD are used for treatment of sewage from Port and township area. Periodic testing of water quality is being done by MOEF&CC approved laboratory and the results are being submitted to SPCB/MOEFCC. All results are well within the prescribed standards. Annexure – IE. 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.	Noted. No treated effluent is being discharged into the public sewer/disposal/drainage systems. Treated water is used for Horticulture purpose as per the Consent to Operate (CTO) given by OSPPCB.

**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<sup>th</sup> November 2019 Ref. No. F.No.11-104/2009-1A-III.**

S. No.	Conditions	Compliance Status
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	<p>Noted.</p> <p>As a part of existing operation Noise monitoring is carried out on monthly basis by engaging accredited NABL &amp; MOEF&amp;CC laboratory. The Monitoring results are also submitted to the regional office on a regular basis. The copy is enclosed as Annexure – IC.</p>
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.	<p>Complied.</p> <p>As a part of existing operations,</p> <ul style="list-style-type: none"> <li>• Vehicle maintenance is being conducted periodically. DG sets are provided with acoustic enclosures.</li> <li>• Personnel exposed to noise levels beyond threshold limits have been provided with protective gear like earplugs, earmuffs, etc.</li> <li>• DPCL have a strict maintenance regimen for all plant machinery and equipment which is reviewed by the management every day.</li> </ul> <p>Noise Monitoring is being carried out by a NABL &amp; MOEF&amp;CC accredited laboratory.</p>
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.	<p>Complied.</p> <p>DG set used in existing operation is equipped with acoustic enclosure and noise barrier.</p>
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.	<p>Complied.</p> <p>As part of Existing operation, noise monitoring is carried out at 6 (six) locations, on monthly basis by engaging NABL &amp; MOEF&amp;CC accredited laboratory. All results are within the prescribed limits. The result is enclosed as Annexure – IC.</p>

**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.	<p>Complied.</p> <p>DPCL has installed solar lights along the roads and common areas. Solar power generation activity will be continued in other areas.</p> <p>Roof top Solar power plant of 621kwp capacity is installed.</p>
II	Provide LED lights in their offices and residential areas.	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<sup>th</sup> November 2019 Ref. No. F.No.11-104/2009-1A-III.**

S. No.	Conditions	Compliance Status
		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 areas.
<b>VI. Waste management</b>		
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'23 to Mar'24. 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 a periodical basis. The results conclude that there is no significant impact observed on marine water quality. The details of Marine Water quality monitoring reports for the period from Oct'23 to Mar'24 is enclosed as Annexure IB.
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'23 to Mar'24, a total quantity of 207.611MT(Food waste-150.94MT, Plastic waste-48.754MT, Paper waste-4.224MT, Glass waste -3.693MT) of solid waste has been generated & a total quantity of 156.74MT(Food-150.94MT, Plastic-0MT, Paper-5.8MT, Glass-0MT) has been disposed of handled in line to 5R concept.

**Revised Master Plan - Half yearly Compliance report of the conditions stipulated in Environmental and CRZ Clearance of Revised Master Plan Development of Dhamra Port project vide letter dated 15<sup>th</sup> November 2019 Ref. No. F.No.11-104/2009-1A-III.**

S. No.	Conditions	Compliance Status
		Biodegradable wastes are being used for compost preparation. Recyclable waste is 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 wastes 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	<p>Noted.</p> <p>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 &amp; Recover'.</p> <p>During the period Oct'23 to Mar'24 a total quantity of 207.611MT(Food-150.94MT, Plastic-48.754MT, Paper-4.224MT, Glass-3.693MT) of solid waste has been generated&amp; a total quantity of 156.74MT(Food-150.94MT, Plastic-0MT, Paper-5.8MT, Glass-0MT) has been disposed of handled in line to 5R concept.</p> <p>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.</p>
VII	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination	Complied. CFLs and TFLs are properly collected and disposed of for recycling to authorized e-waste recyclers as per the prevailing guidelines /rules of the regulatory authority to avoid mercury contamination.
VIII	Oil spill contingency plan shall be prepared and part of DMP to tackle emergencies. The equipment and recovery of oil from a spill would be assessed. Guidelines given in MARPOL and Shipping Acts for oil spill management would be followed. Mechanism for integration of terminals oil contingency plan with the overall area contingency plan under the co-ordination of Coast should be covered	<p>Noted</p> <p>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 Tier 1 training, two persons have undergone IMO Tier 2 training and one person has undergone IMO Tier 3 training at Port.</p>
<b>VII. Green Belt:</b>		
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 23027 nos. of trees have been planted in Inside Port during Oct'23 to Mar'24. Earlier plantation has been done along both edges of the 62.5 km rail corridor, in adjacent villages and

**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<sup>th</sup> November 2019 Ref. No. F.No.11-104/2009-1A-III.**

S. No.	Conditions	Compliance Status
		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 1 lakh saplings were developed from the nursery during last year having local plant species, forest species, seasonal plants, ornamental shrubs, Indoor plants, medicinal plants, etc. Forest species and local species like Casuriana, Terminalia, Bahunia, Pongamia, Tecoma, Peltophoroum, Delonix, Neem, Calliandra, Bakul, Plumeria, Conocarpous etc are produced.
II	Top soil shall be separately stored and used in the development of green belt	Complied.
<b>VIII. Marine Ecology:</b>		
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 approved laboratory. The details of Marine Water quality monitoring reports for the period from Oct'23 to Mar'24 is enclosed as Annexure IB.
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	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 Berhampur University. Same shall be updated for submission to the State Biodiversity Board / CRZ authority for validation.

**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<sup>th</sup> November 2019 Ref. No. F.No.11-104/2009-1A-III.**

S. No.	Conditions	Compliance Status
	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	
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. The details of Marine Water quality monitoring reports for the period from Oct'23 to Mar'24 is enclosed as Annexure IB.
<b>IX. Public hearing and Human health Issues:</b>		
I	The workspace 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 – ID.
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 for the temporary storage of asbestos materials at site before disposal to CTSDF.	Not Applicable.
IV	Safety training shall be given to all workers specific to their work area and every worker and employee will be engaged in fire hazard awareness training and mock drills which will be conducted regularly. All standard safety and occupational hazard measures shall be implemented and monitored by the concerned officials to prevent the occurrence of untoward incidents/ accidents	Complied. The employees, workers of DPCL have been trained on safety guidelines. Regular Fire training, Mock Drills are conducted as per the Crisis Management Plan. The details of drills, Safety training, Fire training conducted towards dock safety for the period Oct'23 to Mar'24 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	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

**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<sup>th</sup> November 2019  
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S. No.	Conditions	Compliance Status
	may be in the form of temporary structures to be removed after the completion of the project	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 Executive, who will directly report to the head of the organization.	DPCL has a well-structured Environmental Management Cell, staffed with qualified manpower at site supported by team at Head Office in Ahmedabad.
III	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	Noted & will be complied. As a part of existing operation EMP has been prepared. Environment Management Plan is enclosed as Annexure II.
IV	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Noted. Internal and external IMS audit (Integrated Management System) is being carried out by internal auditor (half yearly) / external agency (annually) as per ISO 14001:2015 (Environment Management System). Same will be continued for Revised Master Plan development of the Port.

**XI. Miscellaneous:**

I	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and	Complied
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**Revised Master Plan - Half yearly Compliance report of the conditions stipulated in Environmental and CRZ Clearance of Revised Master Plan Development of Dhamra Port project vide letter dated 15<sup>th</sup> November 2019 Ref. No. F.No.11-104/2009-1A-III.**

S. No.	Conditions	Compliance Status
I	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.	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/MOEF/2023-83 dated 24.11.2023
V	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company	Complied Environmental Statement for FY 2022-23 was submitted to SPCB Odisha vide our letter no. DPCL/ENV/2022-070 dated 23.09.2023.
VI	The criteria pollutant levels namely; PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NOx (ambient levels) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Complied As a part of Existing operation Ambient Level is being monitored with a frequency (weekly twice) by a NABL & MOEF&CC accredited laboratory. The Monitoring data is being displayed at DPCL main gate for public view.
VII	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project	Noted.
VIII	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Noted and is being complied.
IX	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee	Noted. Environment Management Plan is enclosed as Annexure II. Commitments made during Public hearing are being complied.

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Ref. No. F.No.11-104/2009-1A-III.**

S. No.	Conditions	Compliance Status
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.
XI	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted
XII	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Noted
XIII	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted
XIV	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Noted and is complied with full cooperation during the inspection.
XV	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability 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.	Noted
XVI	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted

### List of Annexure

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

# **Annexure-IA**

# Mitra S. K. Private Limited



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

## AMBIENT AIR QUALITY MONITORING REPORT

T : (0674) 2380917, 9777460189  
F : (0674) 2362918

(October 2023 -March 2024)

MONTH	PARAMETERS	COLONY	KANAKA PRASAD	JETTY	BH	DOSINGA	SHITARKANIKA
October-2023	PM <sub>10</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	67.4	66.4	79.1	76.9	58.5
		Min	44.5	46.8	59.3	64.6	40.9
		Avg	52.97	57.30	69.54	69.64	49.63
November-2023	PM <sub>10</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	62.4	64.8	70.8	72.3	62.1
		Min	47.5	42.5	56.1	50.9	40.1
		Avg	54.68	53.84	66.34	63.24	51.13
December-2023	PM <sub>10</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	66.8	54.7	76.8	69.1	58.3
		Min	49.2	40.6	53.4	52.7	40.1
		Avg	55.11	47.09	67.48	60.31	48.23
January-2024	PM <sub>10</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	65.9	63.5	76.4	74.6	61.8
		Min	40.3	46.9	55.4	46.9	44.3
		Avg	54.26	53.87	66.94	60.96	52.41
February-2024	PM <sub>10</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	62.1	60.1	83.4	72.6	62.1
		Min	47.5	44.7	65.4	55.4	40.2
		Avg	55.18	51.99	75.75	64.84	50.81
March-2024	PM <sub>10</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	66.4	62.7	88.4	75.4	59.6
		Min	44.3	40.3	62.1	50.6	40.2
		Avg	55.01	53.96	76.60	61.94	49.52

### Particulate Matter (PM<sub>2.5</sub>)

October-2023	PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	36.8	40.8	39.6	51.4	29.1	29.4
		Min	20.6	22.1	29.7	24.3	20.1	20.1
		Avg	27.04	30.60	33.17	36.13	24.94	24.67
November-2023	PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	30.2	31.6	35.1	36.4	31.2	27.1
		Min	22.6	20.5	26.9	22.1	20.4	20.3
		Avg	25.92	26.02	31.24	29.79	25.04	23.64
December-2023	PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	32.7	26.8	35.4	34.6	29.1	29.7
		Min	20.8	20.1	24.7	25.8	20.2	20.1
		Avg	25.87	23.20	29.91	29.30	23.57	24.59
January-2024	PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	32.1	31.6	40.6	34.8	29.7	28.9
		Min	20.2	21.6	20.4	20.6	21.6	17.4
		Avg	26.06	26.12	29.82	28.41	25.10	22.88
February-2024	PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	30.1	29.7	41.5	35.1	30.2	25.6
		Min	19.6	17.5	30.1	24.2	16.7	15.3
		Avg	24.85	23.95	35.30	30.58	24.23	20.74
March-2024	PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	32.9	30.1	42.4	37.4	26.8	26.8
		Min	16.5	17.4	29.7	20.6	16.5	16.4
		Avg	24.51	24.54	35.76	29.24	20.91	21.19

For Mitra S.K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
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## AMBIENT AIR QUALITY MONITORING REPORT (October 2023-March 2024)

MONTH		COLONY	KANAKA	JETTY	BMH	DOSINGA	BHITARKANIKA
October-2023	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	7.8	9.4	9.8	8.6	7.7
		Min	6.2	6.4	6.8	6.8	6.1
		Avg	6.99	7.57	8.16	7.80	6.92
November-2023	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	7.9	7.9	8.9	8.4	7.4
		Min	6.1	6.3	6.7	6.2	6.2
		Avg	7.01	6.94	7.57	7.28	6.90
December-2023	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	7.6	7.7	8.6	8.4	7.7
		Min	6.1	6.2	6.7	6.3	6.1
		Avg	6.93	6.84	7.66	7.28	6.85
January-2024	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	8.1	7.8	8.8	8.6	7.9
		Min	6.7	6.1	6.8	6.5	6.2
		Avg	7.28	6.99	7.63	7.62	6.97
February-2024	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	7.6	7.4	8.7	8.4	7.6
		Min	6.1	6.1	6.4	6.6	6.1
		Avg	6.98	6.70	7.41	7.40	6.84
March-2024	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	7.8	7.8	9.3	8.4	8.1
		Min	6.1	6.1	6.4	6.4	6.2
		Avg	6.88	6.87	7.74	7.28	7.13

### Oxides of Nitrogen ( NO<sub>x</sub> )

October-2023	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	28.7	30.6	36.8	36.8	26.0	27.9
		Min	14.3	19.7	22.9	19.7	16.4	15.4
		Avg	21.64	23.83	29.10	28.66	21.20	21.00
November-2023	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	24.7	27.8	35.1	32.1	26.8	25.6
		Min	15.4	15.2	20.1	17.4	14.6	16.9
		Avg	20.04	22.23	27.46	24.56	20.65	20.44
December-2023	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	28.4	23.8	32.1	32.1	26.9	26.1
		Min	13.7	16.7	20.5	20.8	14.2	16.5
		Avg	20.88	20.20	26.20	25.52	19.60	21.06
January-2024	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	28.1	27.8	36.9	32.1	25.4	26.7
		Min	14.7	18.5	17.8	16.7	17.5	14.9
		Avg	22.41	22.63	25.58	24.29	21.42	19.46
February-2024	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	24.7	26.4	36.9	31.6	25.2	22.8
		Min	12.8	12.7	21.6	17.6	12.7	12.9
		Avg	19.11	19.46	28.78	25.41	20.09	17.64
March-2024	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )	Max	26.7	27.5	34.2	33.2	22.6	22.1
		Min	12.6	13.4	20.1	15.9	12.9	12.1
		Avg	19.40	20.79	26.56	24.79	17.16	16.84

For Mitra S.K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited

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

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



## AMBIENT AIR QUALITY MONITORING REPORT (October 2023 - March 2024)

MONTH	PARAMETERS	COLONY	KANAKA PRASAD	JETTY	BHII	DOSINGA	SHITARKANIKA
October-2023	CO (mg/m <sup>3</sup> )	Max	0.61	0.57	0.73	0.79	0.75
		Min	0.29	0.45	0.52	0.45	0.42
		Avg	0.47	0.56	0.63	0.60	0.57
November-2023	CO (mg/m <sup>3</sup> )	Max	0.66	0.64	0.84	0.74	0.63
		Min	0.41	0.46	0.60	0.47	0.41
		Avg	0.58	0.56	0.73	0.59	0.52
December-2023	CO (mg/m <sup>3</sup> )	Max	0.64	0.64	0.75	0.74	0.66
		Min	0.44	0.40	0.47	0.57	0.41
		Avg	0.55	0.50	0.64	0.61	0.54
January-2024	CO (mg/m <sup>3</sup> )	Max	0.66	0.69	0.74	0.74	0.72
		Min	0.44	0.40	0.50	0.44	0.40
		Avg	0.55	0.55	0.62	0.61	0.56
February-2024	CO (mg/m <sup>3</sup> )	Max	0.66	0.64	0.78	0.67	0.63
		Min	0.44	0.44	0.47	0.45	0.40
		Avg	0.54	0.55	0.63	0.56	0.51
March-2024	CO (mg/m <sup>3</sup> )	Max	0.70	7.8	0.84	0.70	0.66
		Min	0.44	6.1	0.60	0.44	0.40
		Avg	0.56	6.87	0.73	0.57	0.53
<b>Ammonia (NH<sub>3</sub>)</b>							
October-2023	NH <sub>3</sub> (µg/m <sup>3</sup> )	Max	17.6	24.1	32.1	27.4	20.8
		Min	12.1	12.6	15.8	15.6	12.4
		Avg	15.04	16.21	23.28	19.96	16.31
November-2023	NH <sub>3</sub> (µg/m <sup>3</sup> )	Max	20.1	24.8	31.4	30.1	23.8
		Min	12.9	12.1	15.1	12.4	12.7
		Avg	16.22	18.90	23.24	20.51	17.23
December-2023	NH <sub>3</sub> (µg/m <sup>3</sup> )	Max	24.2	20.1	29.8	28.6	23.4
		Min	12.1	12.8	15.4	16.4	12.1
		Avg	17.30	18.12	21.87	21.60	16.13
January-2024	NH <sub>3</sub> (µg/m <sup>3</sup> )	Max	25.6	23.9	32.1	27.4	21.8
		Min	12.8	14.5	12.8	12.8	12.5
		Avg	19.14	18.98	21.56	20.03	17.73
February-2024	NH <sub>3</sub> (µg/m <sup>3</sup> )	Max	19.6	19.7	24.7	20.1	22.6
		Min	12.0	12.1	12.6	13.7	12.1
		Avg	16.18	16.86	18.96	17.67	17.80
March-2024	NH <sub>3</sub> (µg/m <sup>3</sup> )	Max	21.4	27.3	26.4	23.7	18.4
		Min	12.6	13.4	15.0	15.2	12.1
		Avg	18.92	20.79	20.41	20.15	15.48

For Mitra S.K. Private Limited



Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
(CIN: U51909WB1956PTC023037)

T : (0674) 2360917, 9777450180  
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## AMBIENT AIR QUALITY MONITORING REPORT (October 2023 -March 2024)



MONTH	PARAMETERS	COLONY	KANAKA PRASAD	JETTY	BMH	DOSINGA	BHITARKANIKA
October-2023	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	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-2023	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	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-2023	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	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-2024	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	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-2024	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	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-2024	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	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-2023	Pb ( $\mu\text{g}/\text{m}^3$ )	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-2023	Pb ( $\mu\text{g}/\text{m}^3$ )	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-2023	Pb ( $\mu\text{g}/\text{m}^3$ )	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-2024	Pb ( $\mu\text{g}/\text{m}^3$ )	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-2024	Pb ( $\mu\text{g}/\text{m}^3$ )	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-2024	Pb ( $\mu\text{g}/\text{m}^3$ )	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

For Mitra S.K. Private Limited



Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
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## AMBIENT AIR QUALITY MONITORING REPORT (October 2023 - March 2024)

MONTH	PARAMETERS	COLONY	KANAKA PRASAD	JETTY	BMH	DOSINGA	BHITARKANIKA
October-2023	Ni (ng/m <sup>3</sup> )	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-2023	Ni (ng/m <sup>3</sup> )	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-2023	Ni (ng/m <sup>3</sup> )	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-2024	Ni (ng/m <sup>3</sup> )	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-2024	Ni (ng/m <sup>3</sup> )	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-2024	Ni (ng/m <sup>3</sup> )	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
<b>Arsenic (As)</b>							
October-2023	As (ng/m <sup>3</sup> )	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-2023	As (ng/m <sup>3</sup> )	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-2023	As (ng/m <sup>3</sup> )	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-2024	As (ng/m <sup>3</sup> )	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-2024	As (ng/m <sup>3</sup> )	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-2024	As (ng/m <sup>3</sup> )	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

For Mitra S.K. Private Limited



Authorized Signatory

# Mitra S. K. Private Limited

Plot No-887/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015

[CIN: U51909WB1958PTC023037]

T : (0674) 2360917, 9777450189



## AMBIENT AIR QUALITY MONITORING REPORT

(October 2023 -March 2024)

MONTH	PARAMETERS	COLONY	KANAKA PRASAD	JETTY	BMH	DOSINGA	BHITARKANIKA
October-2023	C <sub>6</sub> H <sub>6</sub> (µg/m <sup>3</sup> )	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-2023	C <sub>6</sub> H <sub>6</sub> (µg/m <sup>3</sup> )	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-2023	C <sub>6</sub> H <sub>6</sub> (µg/m <sup>3</sup> )	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-2024	C <sub>6</sub> H <sub>6</sub> (µg/m <sup>3</sup> )	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-2024	C <sub>6</sub> H <sub>6</sub> (µg/m <sup>3</sup> )	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-2024	C <sub>6</sub> H <sub>6</sub> (µg/m <sup>3</sup> )	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-2023	BaP (ng/m <sup>3</sup> )	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-2023	BaP (ng/m <sup>3</sup> )	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-2023	BaP (ng/m <sup>3</sup> )	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-2024	BaP (ng/m <sup>3</sup> )	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-2024	BaP (ng/m <sup>3</sup> )	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-2024	BaP (ng/m <sup>3</sup> )	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

For Mitra S.K. Private Limited



Authorized Signatory

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1958PTC023037]

T : (0674) 2360917, 9777450189  
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## TEST REPORT

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

Report No. : BBS/538  
 Date : 06.01.2024  
 Sample No. : MSKGL/ED/2023-24/12/00508  
 Sample Description : Flue Gas Monitoring  
 Date of Sampling : 25.12.2023  
 Time of Sampling : 04:15 PM

### ANALYSIS RESULT

<b>A. General information about stack :</b>			
1. Stack connected to	: Mantai Complex (Pass Section)		
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>B. Physical characteristics of stack :</b>			
1. Height of the stack from ground level	: 2.26 m		
2. Diameter of the stack at sampling point	: 0.075 m		
3. Height of the sampling point from GL	: 2.26 m		
4. Area of Stack	: 0.00441 m <sup>2</sup>		
<b>C. Analysis/Characteristic of stack:</b>			
1. Fuel used	: HSD		
2. Fuel Consumption	: NA		
<b>D. Results of sampling &amp; analysis of gaseous emission</b>			
	<b>Result</b>	<b>Standard as per Moef &amp; CC</b>	<b>METHOD</b>
1. Temperature of emission (°C)	112	----	IS 11255 (Part III)
2. Barometric pressure (mm of Hg)	761	----	USEPA Part 2
3. Velocity of gas (m/sec.)	10.23	----	IS 11255 (Part III)
4. Quantity of gas flow (Nm <sup>3</sup> /hr.)	123	----	IS 11255 (Part III)
5. Concentration of Carbon monoxide (g/kw-hr)	0.310	≤ 3.5 (g/Kw/hr)	IS 5182 ( Part X)
6. Concentration of Sulphur Dioxide (mg/Nm <sup>3</sup> )	<5.0	----	IS 11255 (Part II)
7. Concentration of Nitrogen Dioxide (g/kw-hr)	0.600	----	IS 11255 (Part VII)
8. Concentration of Particulate Matters ((g/kw-hr))	0.084	≤ 0.3 (g/Kw/hr)	IS 11255 (Part I)
9. Concentration of Hydrocarbon (g/kw-hr)	0.075	----	USEPA Part 18
10. NOx + HC (g/kw-hr)	0.675	≤ 4.7 (g/Kw/hr)	USEPA Part 18

Report Prepared by:



For Mitra S.K. Private Limited

Authorized Signatory

# Mitra S. K. Private Limited



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

T : (0674) 2360917, 9777450189  
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/537  
Date : 06.01.2023  
Sample No. : MSKGL/ED/2023-24/12/00507  
Sample Description : Flue Gas Monitoring  
Date of Sampling : 30.12.2023  
Time of Sampling : 12:10 PM

## ANALYSIS RESULT

<b>A. General information about stack :</b>			
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>B. Physical characteristics of stack :</b>			
1. Height of the stack from ground level	: 3.21 m		
2. Diameter of the stack at sampling point	: 0.08 m		
3. Height of the sampling point from GL	: 3.21 m		
4. Area of Stack	: 0.00503 m <sup>2</sup>		
<b>C. Analysis/Characteristic of stack:</b>			
1. Fuel used	: HSD		
2. Fuel Consumption	: NA		
<b>D. Results of sampling &amp; analysis of gaseous emission</b>			
	<b>Result</b>	<b>Standard as per Moef &amp; CC</b>	<b>METHOD</b>
1. Temperature of emission (°C)	116	----	IS 11255 (Part III)
2. Barometric pressure (mm of Hg)	762	----	USEPA Part 2
3. Velocity of gas (m/sec.)	10.70	----	IS 11255 (Part III)
4. Quantity of gas flow (Nm <sup>3</sup> /hr.)	145	----	IS 11255 (Part III)
5. Concentration of Carbon monoxide (g/kw-hr)	0.090	≤ 3.5 (g/Kw/hr)	IS 5182 ( Part X)
6. Concentration of Sulphur Dioxide (mg/Nm <sup>3</sup> )	<5.0	----	IS 11255 (Part II)
7. Concentration of Nitrogen Dioxide (g/kw-hr)	0.130	----	IS 11255 (Part VII)
8. Concentration of Particulate Matters ((g/kw-hr))	0.026	≤ 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)	0.140	≤ 4.0 (g/Kw/hr)	USEPA Part 18

*C. Kanta*  
Report Prepared by:



For Mitra S.K. Private Limited

*A. K. Raut*

Authorized Signatory  
H.O.: Shracchi 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

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

T : (0674) 2360917, 9777450189  
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/545**  
**Date : 06.01.2024**  
**Sample No. : MSKGL/ED/2023-24/12/00515**  
**Sample Description : Flue Gas Monitoring**  
**Date of Sampling : 30.12.2023**  
**Time of Sampling : 01:50 PM**

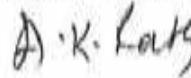
### ANALYSIS RESULT

<b>A. General information about stack :</b>	
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>B. Physical characteristics of stack :</b>	
1. Height of the stack from ground level	: 3.3 m
2. Diameter of the stack at sampling point	: 0.09 m
3. Height of the sampling point from GL	: 3.3 m
4. Area of Stack	: 0.00636 m <sup>2</sup>
<b>C. Analysis/Characteristic of stack:</b>	
1. Fuel used	: HSD
2. Fuel Consumption	: NA
<b>D. Results of sampling &amp; analysis of gaseous emission</b>	
	<b>Result</b>
1. Temperature of emission (°C)	97
2. Barometric pressure (mm of Hg)	762
3. Velocity of gas (m/sec.)	15.96
4. Quantity of gas flow (Nm <sup>3</sup> /hr.)	289
5. Concentration of Carbon monoxide (g/kw-hr)	0.120
6. Concentration of Sulphur Dioxide (mg/Nm <sup>3</sup> )	<5.0
7. Concentration of Nitrogen Dioxide (g/kw-hr)	0.270
8. Concentration of Particulate Matters ((g/kw-hr))	0.035
9. Concentration of Hydrocarbon (g/kw-hr)	0.020
10. NOx + HC (g/kw-hr)	0.290
	<b>Standard as per Moef &amp; CC</b>
1. Temperature of emission (°C)	----
2. Barometric pressure (mm of Hg)	----
3. Velocity of gas (m/sec.)	----
4. Quantity of gas flow (Nm <sup>3</sup> /hr.)	IS 11255 (Part III)
5. Concentration of Carbon monoxide (g/kw-hr)	≤ 3.5 (g/Kw/hr)
6. Concentration of Sulphur Dioxide (mg/Nm <sup>3</sup> )	IS 5182 ( Part X)
7. Concentration of Nitrogen Dioxide (g/kw-hr)	IS 11255 (Part VII)
8. Concentration of Particulate Matters ((g/kw-hr))	IS 11255 (Part I)
9. Concentration of Hydrocarbon (g/kw-hr)	USEPA Part 18
10. NOx + HC (g/kw-hr)	USEPA Part 18

  
Report Prepared by:



For Mitra S.K. Private Limited



Authorized Signatory

# Mitra S. K. Private Limited



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

T : (0674) 2360917, 9777450189  
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/541**  
**Date : 06.01.2024**  
**Sample No. : MSKGL/ED/2023-24/12/00511**  
**Sample Description : Flue Gas Monitoring**  
**Date of Sampling : 01.01.2024**  
**Time of Sampling : 12:50 PM**

## ANALYSIS RESULT

<b>A. General information about stack :</b>			
1. Stack connected to	: MCC-2 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>B. Physical characteristics of stack :</b>			
1. Height of the stack from ground level	: 2.2 m		
2. Diameter of the stack at sampling point	: 0.057 m		
3. Height of the sampling point from GL	: 2.2 m		
4. Area of Stack	: 0.01021 m <sup>2</sup>		
<b>C. Analysis/Characteristic of stack:</b>			
1. Fuel used	: HSD		
2. Fuel Consumption	: NA		
<b>D. Results of sampling &amp; analysis of gaseous emission</b>			
	<b>Result</b>	<b>Standard as per Moef &amp; CC</b>	<b>METHOD</b>
1. Temperature of emission (°C)	105	----	IS 11255 (Part III)
2. Barometric pressure (mm of Hg)	762	----	USEPA Part 2
3. Velocity of gas (m/sec.)	12.56	----	IS 11255 (Part III)
4. Quantity of gas flow (Nm <sup>3</sup> /hr.)	358	----	IS 11255 (Part III)
5. Concentration of Carbon monoxide (g/kw-hr)	0.300	≤ 3.5 (g/Kw/hr)	IS 5182 ( Part X)
6. Concentration of Sulphur Dioxide (mg/Nm <sup>3</sup> )	<5.0	----	IS 11255 (Part II)
7. Concentration of Nitrogen Dioxide (g/kw-hr)	0.290	----	IS 11255 (Part VII)
8. Concentration of Particulate Matters ((g/kw-hr))	0.087	≤ 0.3 (g/Kw/hr)	IS 11255 (Part I)
9. Concentration of Hydrocarbon (g/kw-hr)	0.062	----	USEPA Part 18
10. NOx + HC (g/kw-hr)	0.352	≤ 4.7 (g/Kw/hr)	USEPA Part 18

*S. Kumar*  
Report Prepared by:



For Mitra S.K. Private Limited

*A. K. Rath*

Authorized Signatory

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
(CIN: U51909WB1956PTC023037)

T : (0674) 2360917, 9777450189

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/547

**Date :** 01.01.2024

**Sample No. :** MSKGL/ED/2023-24/12/00517

**Sample Description :** Flue Gas Monitoring

**Date of Sampling :** 27.12.2023

**Time of Sampling :** 03:00 PM

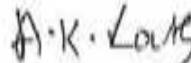
### ANALYSIS RESULT

<b>A. General information about stack :</b>			
1. Stack connected to		: Township Substation	
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>B. Physical characteristics of stack :</b>			
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 <sup>2</sup>	
<b>C. Analysis/Characteristic of stack:</b>			
1. Fuel used	: HSD		
2. Fuel Consumption	: NA		
<b>D. Results of sampling &amp; analysis of gaseous emission</b>		<b>Result</b>	<b>Standard as per Moef &amp; CC</b>
1. Temperature of emission (°C)		115	----
2. Barometric pressure (mm of Hg)		760	----
3. Velocity of gas (m/sec.)		13.35	----
4. Quantity of gas flow (Nm <sup>3</sup> /hr.)		444	----
5. Concentration of Carbon monoxide (g/kw-hr)		0.052	≤ 3.5 (g/Kw/hr)
6. Concentration of Sulphur Dioxide (mg/Nm <sup>3</sup> )		<5.0	----
7. Concentration of Nitrogen Dioxide (g/kw-hr)		0.100	----
8. Concentration of Particulate Matters ((g/kw-hr))		0.019	≤ 0.2 (g/Kw/hr)
9. Concentration of Hydrocarbon (g/kw-hr)		0.014	----
10. NOx + HC (g/kw-hr)		0.114	≤ 4.0 (g/Kw/hr)
			<b>METHOD</b>
			IS 11255 (Part III)
			USEPA Part 2
			IS 11255 (Part III)
			IS 11255 (Part III)
			IS 5182 ( Part X)
			IS 11255 (Part II)
			IS 11255 (Part VII)
			IS 11255 (Part I)
			USEPA Part 18
			USEPA Part 18

  
Report Prepared by:



For Mitra S.K. Private Limited



Authorized Signatory

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

T : (0674) 2360917, 9777450189  
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/540  
 Date : 06.01.2024  
 Sample No. : MSKGL/ED/2023-24/12/00510  
 Sample Description : Flue Gas Monitoring  
 Date of Sampling : 25.12.2023  
 Time of Sampling : 05:07 PM

### ANALYSIS RESULT

<b>A. General information about stack :</b>			
1. Stack connected to	:	DTY DSS 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 KwA	
<b>B. Physical characteristics of stack :</b>			
1. Height of the stack from ground level	:	2.67 m	
2. Diameter of the stack at sampling point	:	0.065 m	
3. Height of the sampling point from GL	:	2.67 m	
4. Area of Stack	:	0.01327 m <sup>2</sup>	
<b>C. Analysis/Characteristic of stack:</b>			
1. Fuel used	:	HSD	
2. Fuel Consumption	:	NA	
<b>D. Results of sampling &amp; analysis of gaseous emission</b>			
	<u>Result</u>	<u>Standard as per Moef &amp; CC</u>	<u>METHOD</u>
1. Temperature of emission (°C)	106	----	IS 11255 (Part III)
2. Barometric pressure (mm of Hg)	762	----	USEPA Part 2
3. Velocity of gas (m/sec.)	7.93	----	IS 11255 (Part III)
4. Quantity of gas flow (Nm <sup>3</sup> /hr.)	292	----	IS 11255 (Part III)
5. Concentration of Carbon monoxide (g/kw-hr)	0.110	≤ 3.5 (g/Kw/hr)	IS 5182 ( Part X)
6. Concentration of Sulphur Dioxide (mg/Nm <sup>3</sup> )	<5.0	----	IS 11255 (Part II)
7. Concentration of Nitrogen Dioxide (g/kw-hr)	0.120	----	IS 11255 (Part VII)
8. Concentration of Particulate Matters ((g/kw-hr))	0.029	≤ 0.2 (g/Kw/hr)	IS 11255 (Part I)
9. Concentration of Hydrocarbon (g/kw-hr)	0.024	----	USEPA Part 18
10. NOx + HC (g/kw-hr)	0.144	≤ 4.0 (g/Kw/hr)	USEPA Part 18

*S. Kannan*  
Report Prepared by:



For Mitra S.K. Private Limited

*A. K. Rath*

Authorized Signatory

# **Annexure-IB**

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1956PTC023037]  
T : (0674) 2360917, 9777450189  
F : (0674) 2362918



TESTING & INSPECTION

## MARINE WATER QUALITY MONITORING REPORT

(October 2023 - March 2024)

March-2024

Parameters	Units	S-1	S-2	S-3	S-4	S-5	S-6	S-7
Colour	Hazen	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Odour	Agreeable							
Temperature	Deg C	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Turbidity	N.T.U	40.0	80.0	140.0	88.0	90.0	129.0	748.0
pH	7.66	6.97	7.46	7.62	7.60	7.35	7.45	
Electrical Conductivity	µS/cm	17521.0	15021.0	16244.0	27021.0	32181.0	37414.0	32950.0
Salinity	mg/l	6131.0	12861.0	8603.0	19970.0	25901.0	24022.0	22067.0
Total Suspended Solids	mg/l	140.0	170.0	150.0	180.0	140.0	180.0	240.0
Total dissolved solids	mg/l	13420.0	11240.0	13200.0	24270.0	25814.0	27055.0	32437.0
Total Hardness	mg/l	1300.0	1660.0	2471.0	3071.0	4870.0	4754.0	3817.0
Calcium Hardness	mg/l	330.0	370.0	670.0	570.0	740.0	657.0	897.0
Magnesium Hardness	mg/l	1701.0	1450.0	1606.0	3684.0	3671.0	3992.0	2874.0
Chloride (as Cl <sup>-</sup> )	mg/l	7847.0	5620.0	7446.0	14964.0	14267.0	180.0	17866.0
Dissolved Oxygen	mg/l	9.1	9.2	6.4	6.5	5.3	6.4	6.4
Biochemical Oxygen Demand (3 days at 27°C)	mg/l	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chemical Oxygen Demand (COD)	mg/l	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Oil & Grease	mg/l	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Dissolved phosphates (as PO <sub>4</sub> <sup>3-</sup> )	mg/l	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/l	620.0	697.0	716.0	1298.0	1458.0	1288.0	1455.0
Nitrite (as NO <sub>2</sub> <sup>-</sup> )	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (as NO <sub>3</sub> <sup>-</sup> )	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ammonical Nitrogen (as NH <sub>3</sub> -N)	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Nitrogen	mg/l	<0.3	<0.3	6.2	<0.3	2.8	<0.3	<0.3
Total Chromium	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Hexavalent chromium (as Cr <sup>6+</sup> )	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Mercury	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Floating material	mg/l	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Petroleum Hydrocarbon	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

For Mitra S.K. Private Limited



Authorized Signatory

# Mitra S. K. Private Limited

Plot No-887/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
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[CIN: U51909WB1956PTC023037]  
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## MARINE WATER QUALITY MONITORING REPORT

(October-2023 - March 2024)

December-2023

Parameters	Units	S-1	S-2	S-3	S-4	S-5	S-6	S-7
Colour	Hazen	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Odour	-----	Agreeable						
Temperature	Deg C	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Turbidity	N.T.U	38.0	84.0	140.0	84.0	92.0	121.0	240.0
pH	-----	7.22	6.90	7.37	7.45	7.67	7.23	7.66
Electrical Conductivity	µs/cm	15840.0	15419.0	16311.0	27719.0	33921.0	38804.0	32617.0
Salinity	mg/l	5918.0	12380.0	8533.0	19880.0	24091.0	21644.0	21987.0
Total Suspended Solids	mg/l	138.0	167.0	155.0	179.0	132.0	176.0	231.0
Total dissolved solids	mg/l	13140.0	10140.0	18022.0	24019.0	24944.0	26755.0	32017.0
Total Hardness	mg/l	1288.0	1612.0	2321.0	3721.0	4977.0	4698.0	3808.0
Calcium Hardness	mg/l	329.0	365.0	620.0	570.0	690.0	684.0	895.0
Magnesium Hardness	mg/l	1651.0	1492.0	1596.0	3414.0	3541.0	3986.0	2790.0
Chloride (as Cl)	mg/l	7657.0	6944.0	7319.0	15124.0	14070.0	177.0	17621.0
Dissolved Oxygen	mg/l	6.4	6.0	6.3	6.4	5.9	6.2	6.2
Biochemical Oxygen Demand (3 days at 27°C)	mg/l	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chemical Oxygen Demand (COD)	mg/l	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Oil & Grease	mg/l	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Dissolved phosphates (as PO <sub>4</sub> )	mg/l	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Sulphate (as SO <sub>4</sub> )	mg/l	850.0	697.0	670.0	1245.0	1588.0	1300.0	1426.0
Nitrite (as NO <sub>2</sub> )	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nitrate (as NO <sub>3</sub> )	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ammonical Nitrogen (as NH <sub>3</sub> -N)	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Nitrogen	mg/l	<0.3	<0.3	5.0	<0.3	2.4	<0.3	<0.3
Total Chromium	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Hexavalent chromium (as Cr <sup>+6</sup> )	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cadmium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Mercury	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Floating material	mg/l	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Petroleum Hydrocarbon	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

For Mitra S.K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1986PTC023037]  
T : (0674) 2360917, 9777450189  
F : (0674) 2362918



## GROUND WATER QUALITY MONITORING REPORT

March - 2024

Parameters	Units	TOWNSHIP	RUNNING ROOM	WTP
pH (at 25° C)	—	7.85	7.74	7.80
Sulphate (as SO <sub>4</sub> )	mg/l	34.0	40.0	42.0
Calcium (as Ca)	mg/l	38.0	49.0	48.0
Arsenic (as As)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Lead (as Pb)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Zinc (as Zn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Copper (as Cu)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Mercury (as Hg)	mg/l	BDL(DL:0.0003)	BDL(DL:0.0003)	BDL(DL:0.0002)
Cadmium (as Cd)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Mineral Oil	mg/l	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)
Fluoride (as F)	mg/l	BDL(DL:0.2)	BDL(DL:0.2)	BDL(DL:0.2)
Colour	Hazen	Agreeable	Agreeable	Agreeable
Odour	—	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Turbidity	N.T.U	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Residual free Chlorine	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Iron (as Fe)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Chloride (as Cl)	mg/l	80.0	72.0	87.0
Total Dissolved Solids	mg/l	540.0	524.0	590.0
Alkalinity (as CaCO <sub>3</sub> )	mg/l	22.0	19.0	27.0
Aluminium (as Al)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Magnesium (as Mg)	mg/l	28.0	21.0	24.0
Total Hardness	mg/l	196.0	188.0	180.0
Boron (as B)	mg/l	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)
Manganese (as Mn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Nitrate (as NO <sub>3</sub> )	mg/l	BDL(DL:0.4)	BDL(DL:0.4)	BDL(DL:0.4)
Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Selenium (as Se)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Total Chromium	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Silver (as Ag)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Barium (as Ba)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Sulphide (as H <sub>2</sub> S)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Ammonia (as total ammonia-N)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Chloramines	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Nickel (as Ni)	mg/l	BDL(DL:0.03)	BDL(DL:0.03)	BDL(DL:0.03)
Cyanide (as CN)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Anionic Detergents (as MBA5)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Polynuclear Aromatic Hydrocarbons(as PAH)	mg/l	BDL(DL:0.0001)	BDL(DL:0.0001)	BDL(DL:0.0001)
Polychlorinated Biphenyls (PCB)	mg/l	BDL(DL:0.0005)	BDL(DL:0.0005)	BDL(DL:0.0005)
Salinity	mg/l	42.0	44.0	38.0
E. Coli	/100 ml	Not Detected	Not Detected	Not Detected
Total Coliform Organism	/100 ml	Not Detected	Not Detected	Not Detected

For Mitra S.K. Private Limited



Authorized Signatory

# Mitra S. K. Private Limited



Plot No-687/242B, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015

[CIN: U51909WB1956PTC023037] GROUND WATER QUALITY MONITORING REPORT

T : (0674) 2360917, 9777450189

F : (0674) 2362918

February - 2024

Parameters	Units	TOWNSHIP	RUNNING ROOM	WTP
pH (at 25°C)	---	8.03	8.20	8.22
Sulphate (as SO <sub>4</sub> )	mg/l	34.0	28.0	30.0
Calcium (as Ca)	mg/l	33.0	48.0	42.0
Arsenic (as As)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Lead (as Pb)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Zinc (as Zn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Copper (as Cu)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Mercury (as Hg)	mg/l	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)
Cadmium (as Cd)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Mineral Oil	mg/l	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)
Fluoride (as F)	mg/l	BDL(DL:0.2)	BDL(DL:0.2)	BDL(DL:0.2)
Colour	Hazen	Agreeable	Agreeable	Agreeable
Odour	---	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Turbidity	N.T.U	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Residual free Chlorine	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Iron (as Fe)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Chloride (as Cl)	mg/l	72.0	70.0	80.0
Total Dissolved Solids	mg/l	490.0	506.0	486.0
Alkalinity (as CaCO <sub>3</sub> )	mg/l	352.0	360.0	344.0
Aluminium (as Al)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Magnesium (as Mg)	mg/l	25.0	33.0	28.0
Total Hardness	mg/l	210.0	220.0	197.0
Boron (as B)	mg/l	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)
Manganese (as Mn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Nitrate (as NO <sub>3</sub> )	mg/l	BDL(DL:0.4)	BDL(DL:0.4)	BDL(DL:0.4)
Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Selenium (as Se)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Total Chromium	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Silver (as Ag)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Barium (as Ba)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Sulphide (as H <sub>2</sub> S)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Ammonia (as total ammonia-N)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Chloramines	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Nickel (as Ni)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Cyanide (as CN)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Anionic Detergents (as MEAS)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	BDL(DL:0.0001)	BDL(DL:0.0001)	BDL(DL:0.0001)
Polychlorinated Biphenyls (PCB)	mg/l	BDL(DL:0.0005)	BDL(DL:0.0005)	BDL(DL:0.0005)
Salinity	mg/l	42.0	41.0	46.0
E. Coli	/100 ml	Not Detected	Not Detected	Not Detected
Total Coliform Organism	/100 ml	Not Detected	Not Detected	Not Detected

For Mitra S.K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited

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

T : (0674) 2360917, 9777450189 GROUND WATER QUALITY MONITORING REPORT  
F : (0674) 2362918



January - 2024

Parameters	Units	TOWNSHIP	RUNNING ROOM	WTP
pH (at 25° C)	-	8.08	7.94	8.01
Sulphate (as SO <sub>4</sub> )	mg/l	34.0	36.0	33.0
Calcium (as Ca)	mg/l	35.0	45.0	40.0
Arsenic (as As)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Lead (as Pb)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Zinc (as Zn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Copper (as Cu)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Mercury (as Hg)	mg/l	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)
Cadmium (as Cd)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Mineral Oil	mg/l	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)
Fluoride (as F)	mg/l	BDL(DL:0.2)	BDL(DL:0.2)	BDL(DL:0.2)
Colour	Hazen	Agreeable	Agreeable	Agreeable
Odour	-	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Turbidity	N.T.U	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Residual free Chlorine	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Iron (as Fe)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Chloride (as Cl)	mg/l	74.0	70.0	80.0
Total Dissolved Solids	mg/l	376.0	412.0	378.0
Alkalinity (as CaCO <sub>3</sub> )	mg/l	148.0	168.0	184.0
Aluminium (as Al)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Magnesium (as Mg)	mg/l	25.0		27.0
Total Hardness	mg/l	192.0		166.0
Boron (as B)	mg/l	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)
Manganese (as Mn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Nitrate (as NO <sub>3</sub> )	mg/l	BDL(DL:0.4)	BDL(DL:0.4)	BDL(DL:0.4)
Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Selenium (as Se)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Total Chromium	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Silver (as Ag)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Barium (as Ba)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Sulphide (as H <sub>2</sub> S)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Ammonia (as total ammonia-N)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Chloramines	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Nickel (as Ni)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Cyanide (as CN)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Anionic Detergents (as MBAS)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Polyynuclear Aromatic Hydrocarbons(as PAH)	mg/l	BDL(DL:0.0001)	BDL(DL:0.0001)	BDL(DL:0.0001)
Polychlorinated Biphenyls (PCB)	mg/l	BDL(DL:0.0005)	BDL(DL:0.0005)	BDL(DL:0.0005)
Salinity	mg/l	48.0	45.0	48.0
E. Coli	/100 ml	Not Detected	Not Detected	Not Detected
Total Coliform Organism	/100 ml	Not Detected	Not Detected	Not Detected

For Mitra S.K. Private Limited



Authorized Signatory

# Mitra S. K. Private Limited

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

T : (0674) 2360917, 9777450189

F : (0674) 2362918



## GROUND WATER QUALITY MONITORING REPORT

December - 2023

Parameters	Units	TOWNSHIP	RUNNING ROOM	WTP
pH (at 25° C)	---	8.12	7.89	7.95
Sulphate (as SO <sub>4</sub> )	mg/l	32.0	39.0	37.0
Calcium (as Ca)	mg/l	35.0	46.0	38.0
Arsenic (as As)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Lead (as Pb)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Zinc (as Zn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Copper (as Cu)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Mercury (as Hg)	mg/l	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)
Cadmium (as Cd)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Mineral Oil	mg/l	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)
Fluoride (as F)	mg/l	BDL(DL:0.2)	BDL(DL:0.2)	BDL(DL:0.2)
Colour	Hazen	Agreeable	Agreeable	Agreeable
Odour	----	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Turbidity	N,T,U	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Residual free Chlorine	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Iron (as Fe)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Chloride (as Cl)	mg/l	68.0	68.0	74.0
Total Dissolved Solids	mg/l	412.0	418.0	402.0
Alkalinity (as CaCO <sub>3</sub> )	mg/l	162.0	168.0	182.0
Aluminium (as Al)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Magnesium (as Mg)	mg/l	26.0	20.0	22.0
Total Hardness	mg/l	182.0	184.0	172.0
Boron (as B)	mg/l	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)
Manganese (as Mn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Nitrate (as NO <sub>3</sub> )	mg/l	BDL(DL:0.4)	BDL(DL:0.4)	BDL(DL:0.4)
Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Selenium (as Se)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Total Chromium	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Silver (as Ag)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Barium (as Ba)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Sulphide (as H <sub>2</sub> S)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Ammonia (as total ammonia-N)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Chloramines	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Nickel (as Ni)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Cyanide (as CN)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Anionic Detergents (as MBAS)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Polynuclear Aromatic Hydrocarbons(as PAH)	mg/l	BDL(DL:0.0001)	BDL(DL:0.0001)	BDL(DL:0.0001)
Polychlorinated Biphenyls (PCB)	mg/l	BDL(DL:0.0005)	BDL(DL:0.0005)	BDL(DL:0.0005)
Salinity	mg/l	40.0	47.0	36.0
E. Coli	/100 ml	Not Detected	Not Detected	Not Detected
Total Coliform Organism	/100 ml	Not Detected	Not Detected	Not Detected

For Mitra S.K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
(CIN: U51909WB1958PTC023037)  
T : (0674) 2380917, 9777450189  
F : (0674) 2362918



## GROUND WATER QUALITY MONITORING REPORT

November-2023

PARAMETERS	UNITS	TOWNSHIP	RUNNING ROOM	WTP
pH (at 25° C)	---	7.92	7.68	7.81
Sulphate (as SO <sub>4</sub> )	mg/l	52.0	79.0	80.0
Calcium (as Ca)	mg/l	34.0	43.0	38.0
Arsenic (as As)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Lead (as Pb)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Zinc (as Zn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Copper (as Cu)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Mercury (as Hg)	mg/l	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)
Cadmium (as Cd)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Mineral Oil	mg/l	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)
Fluoride (as F)	mg/l	BDL(DL:0.2)	BDL(DL:0.2)	BDL(DL:0.2)
Colour	Hazen	Agreeable	Agreeable	Agreeable
Odeur	---	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Turbidity	N.T.U	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Residual free Chlorine	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Iron (as Fe)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Chloride (as Cl)	mg/l	73.0	48.0	76.0
Total Dissolved Solids	mg/l	356.0	396.0	368.0
Alkalinity (as CaCO <sub>3</sub> )	mg/l	142.0	182.0	174.0
Aluminium (as Al)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Magnesium (as Mg)	mg/l	25.0	24.0	22.0
Total Hardness	mg/l	188.0	170.0	158.0
Boron (as B)	mg/l	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)
Manganese (as Mn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Nitrate (as NO <sub>3</sub> )	mg/l	BDL(DL:0.4)	BDL(DL:0.4)	BDL(DL:0.4)
Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Selenium (as Se)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Total Chromium	mg/l	BDL(DL:0.03)	BDL(DL:0.01)	BDL(DL:0.01)
Silver (as Ag)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Berium (as Ba)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Sulphide (as H <sub>2</sub> S)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Ammonia (as total ammonia-N)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Chloramines	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Nickel (as Ni)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Cyanide (as CN)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Anionic Detergents (as MBSA)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Polynuclear Aromatic Hydrocarbons(as PAH)	mg/l	BDL(DL:0.0001)	BDL(DL:0.0001)	BDL(DL:0.0001)
Polychlorinated Biphenyls (PCB)	mg/l	BDL(DL:0.0005)	BDL(DL:0.0005)	BDL(DL:0.0005)
Salinity	mg/l	46.0	44.0	46.0
E. Coli	/100 ml	Not Detected	Not Detected	Not Detected
Total Coliform Organism	/100 ml	Not Detected	Not Detected	Not Detected

For Mitra S.K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited

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

T : (0674) 2360917, 9777450189      GROUND WATER QUALITY MONITORING REPORT  
F : (0674) 2362918



October-2023

Parameters	Units	TOWNSHIP	RUNNING ROOM	WTP
pH (at 25°C)	---	7.95	7.67	7.80
Sulphate (as SO <sub>4</sub> )	mg/l	15.0	20.0	17.0
Calcium (as Ca)	mg/l	36.0	54.0	44.0
Arsenic (as As)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Lead (as Pb)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Zinc (as Zn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Copper (as Cu)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Mercury (as Hg)	mg/l	BDL(DL:0.0002)	BDL(DL:0.0002)	BDL(DL:0.0002)
Cadmium (as Cd)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Mineral Oil	mg/l	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)
Fluoride (as F)	mg/l	BDL(DL:0.2)	BDL(DL:0.2)	BDL(DL:0.2)
Colour	Hazen	Agreeable	Agreeable	Agreeable
Odour	----	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Turbidity	N.T.U	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)
Residual free Chlorine	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Iron (as Fe)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Chloride (as Cl)	mg/l	70.0	130.0	142.0
Total Dissolved Solids	mg/l	342.0	402.0	428.0
Alkalinity (as CaCO <sub>3</sub> )	mg/l	154.0	166.0	190.0
Aluminium (as Al)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Magnesium (as Mg)	mg/l	20.0	24.0	28.0
Total Hardness	mg/l	172.0	178.0	160.0
Boron (as B)	mg/l	BDL(DL:0.3)	BDL(DL:0.3)	BDL(DL:0.3)
Manganese (as Mn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Nitrate (as NO <sub>3</sub> )	mg/l	BDL(DL:0.4)	BDL(DL:0.4)	BDL(DL:0.4)
Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)
Selenium (as Se)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Total Chromium	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Silver (as Ag)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)	BDL(DL:0.005)
Barium (as Ba)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Sulphide (as H <sub>2</sub> S)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)	BDL(DL:0.02)
Ammonia (as total ammonia-N)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Chloramines	mg/l	BDL(DL:0.1)	BDL(DL:0.1)	BDL(DL:0.1)
Nickel (as Ni)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Cyanide (as CN)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)
Anionic Detergents (as MBAS)	mg/l	BDL(DL:0.05)	BDL(DL:0.05)	BDL(DL:0.05)
Polynuclear Aromatic Hydrocarbons (as PAH)	mg/l	BDL(DL:0.0001)	BDL(DL:0.0001)	BDL(DL:0.0001)
Polychlorinated Biphenyls (PCB)	mg/l	BDL(DL:0.0005)	BDL(DL:0.0005)	BDL(DL:0.0005)
Salinity	mg/l	45.0	46.0	48.0
E. Coli	/100 ml	Not Detected	Not Detected	Not Detected
Total Coliform Organism	/100 ml	Not Detected	Not Detected	Not Detected



For Mitra S.K. Private Limited

Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
 Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
 Bhubaneswar, Khordha, Odisha-751015  
 [CIN: U51909WB1956PTC023037]  
 T : (0674) 2360017, 9777450189  
 F : (0674) 2362918



## SURFACE WATER QUALITY MONITORING REPORT

March-2024

Parameters	Units	S-1	S-2
pH ( at 25° C)	Hour	7.03	7.87
Sulphate (as SO <sub>4</sub> )	mg/l	1300.0	1500.0
Calcium (as Ca)	mg/l	162.0	170.0
Arsenic (as As)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)
Lead (as Pb)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)
Zinc (as Zn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)
Copper (as Cu)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)
Mercury (as Hg)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)
Cadmium (as Cd)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)
Mineral Oil	mg/l	BDL(DL:0.01)	BDL(DL:0.01)
Fluoride (as F)	mg/l	0.79	0.68
Colour	mg/l	BDL(DL:1.0)	BDL(DL:1.0)
Odour	mg/l	Agreeable	Agreeable
Turbidity	mg/l	360.0	240.0
Residual free Chlorine	mg/l	BDL(DL:0.1)	BDL(DL:0.1)
Iron (as Fe)	mg/l	3.2	3.0
Chloride (as Cl)	mg/l	10296.0	10496.0
Total Dissolved Solids	mg/l	17908.0	18593.0
Alkalinity (as CaCO <sub>3</sub> )	mg/l	108.0	104.0
Aluminium (as Al)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)
Magnesium (as Mg)	mg/l	565.0	621.0
Total Hardness (as CaCO <sub>3</sub> )	mg/l	2730.0	2980.0
Boron (as B)	mg/l	BDL(DL:0.3)	BDL(DL:0.3)
Manganese (as Mn)	mg/l	BDL(DL:0.5)	BDL(DL:0.5)
Nitrate (as NO <sub>3</sub> )	mg/l	3.3	2.7
Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)
Selenium (as Se)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)
Total Chromium (as Cr)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)
Silver (as Ag)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)
Barium (as Ba)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)
Salinity	mg/l	19684.0	19663.0
Sulphide (as H <sub>2</sub> S)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)
Ammonia (as total ammonia-N)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)
Chloramines	mg/l	BDL(DL:0.1)	BDL(DL:0.1)
Conductivity	μs/cm	28552.0	28995.0
Nickel (as Ni)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)
Cyanide (as CN)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)
Anionic Detergents	mg/l	BDL(DL:0.05)	BDL(DL:0.05)
PAH	mg/l	BDL(DL:0.0001)	BDL(DL:0.0001)
PCB	mg/l	BDL(DL:0.0005)	BDL(DL:0.0005)

For Mitra S.K. Private Limited



Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
 Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
 Bhubaneswar, Khordha, Odisha-751015  
 [CIN: U51909WB1956PTC023037]  
 T : (0674) 2360917, 9777450189  
 F : (0674) 2362918



## SURFACE WATER QUALITY MONITORING REPORT

December-2023

Parameters	Units	S-1	S-2
pH (at 25° C)	Hazen	7.81	7.74
Sulphate (as SO <sub>4</sub> )	mg/l	260.0	320.0
Calcium (as Ca)	mg/l	54.0	62.0
Arsenic (as As)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)
Lead (as Pb)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)
Zinc (as Zn)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)
Copper (as Cu)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)
Mercury (as Hg)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)
Cadmium (as Cd)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)
Mineral Oil	mg/l	BDL(DL:0.01)	BDL(DL:0.01)
Fluoride (as F)	mg/l	0.83	0.82
Colour	mg/l	BDL(DL:1.0)	BDL(DL:1.0)
Odour	mg/l	Agreeable	Agreeable
Turbidity	mg/l	98.0	52.0
Residual free Chlorine	mg/l	BDL(DL:0.1)	BDL(DL:0.1)
Iron (as Fe)	mg/l	3.3	1.6
Chloride (as Cl)	mg/l	2000.0	2800.0
Total Dissolved Solids	mg/l	4070.0	5457.0
Alkalinity (as CaCO <sub>3</sub> )	mg/l	80.0	88.0
Aluminium (as Al)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)
Magnesium (as Mg)	mg/l	131.0	175.0
Total Hardness (as CaCO <sub>3</sub> )	mg/l	680.0	884.0
Boron (as B)	mg/l	BDL(DL:0.3)	BDL(DL:0.3)
Manganese (as Mn)	mg/l	BDL(DL:0.5)	BDL(DL:0.5)
Nitrate (as NO <sub>3</sub> )	mg/l	6.4	6.6
Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	BDL(DL:0.001)	BDL(DL:0.001)
Selenium (as Se)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)
Total Chromium (as Cr)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)
Silver (as Ag)	mg/l	BDL(DL:0.005)	BDL(DL:0.005)
Barium (as Ba)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)
Salinity	mg/l	58.0	55.0
Sulphide (as H <sub>2</sub> S)	mg/l	BDL(DL:0.02)	BDL(DL:0.02)
Ammonia (as total ammonia-N)	mg/l	BDL(DL:0.1)	BDL(DL:0.1)
Chloramines	mg/l	BDL(DL:0.1)	BDL(DL:0.1)
Conductivity	µs/cm	5730.0	7290.0
Nickel (as Ni)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)
Cyanide (as CN)	mg/l	BDL(DL:0.01)	BDL(DL:0.01)
Anionic Detergents	mg/l	BDL(DL:0.05)	BDL(DL:0.05)
PAH	mg/l	BDL(DL:0.0001)	BDL(DL:0.0001)
PCB	mg/l	BDL(DL:0.0005)	BDL(DL:0.0005)

For Mitra S.K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited

Plot No-887/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751016  
(CIN: U51909WB1958PTC023037)



Date: 05.04.2024

## ZOOPLANKTON MONITORING REPORT

F : 0674, Zin2918

<b>Client Name &amp; Address</b>	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha		
<b>Work Order No.</b>	4802036272		
<b>Reference No.</b>	MSKG1/ED/2023-24/00200		
<b>Type of Sample</b>	Marine Sample (Zooplankton)		
<b>Sampling Location</b>	S1:Dhamra River Mouth S2:Dry Bulk Cargo Berth Face S5:Along Chanel at 5Km S7:Near Kanika Island	S3:Liquid/Gas/Cyrogenic Berth Face S4:Along Channel at 1Km S6: Along Channel at 10Km	
<b>Date of Sampling</b>	16.03.2024		
<b>Date of Analysis</b>	16.03.2024 to 05.04.2024		
<b>Sampling Done by</b>	Mr. Kunja Bihari Nayak		

<b>Name of the Parameters</b>		<b>Total count</b>	<b>No of species</b>	<b>Major Species</b>
<b>Unit</b>	Units/L	Nos.	-----	
<b>Testing Method</b>	APHA 10200	APHA 10200	APHA (23 <sup>rd</sup> Edition) 10200	
<b>Analysis Result</b>				
S-1	Surface Water	None	None	None
	Bottom water	None	None	None
S-2	Surface Water	None	None	None
	Bottom water	3000	7	Daphnia
S-3	Surface Water	None	None	None
	Bottom water	1800	4	Daphnia
S-4	Surface Water	None	None	None
	Bottom water	None	None	None
S-5	Surface Water	None	None	None
	Bottom water	None	None	None
S-6	Surface Water	None	None	None
	Bottom water	None	None	None
S-7	Surface Water	None	None	None
	Bottom water	None	None	None

Prepared By -

Checked By-



# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751016  
(CIN: U51909WB1956PTC023037)  
T : (0674) 2360917, 9777450180  
F : (0674) 2362918



Date: 05.04.2024

## MICROBIOLOGICAL MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha							
Work Order No.	4802036272							
Reference No.	MSKGIL/ED/2023-24/00200							
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	16.03.2024							
Date of Analysis	16.03.2024 to 08.04.2024							
Sampling Done by	Mr. Kunja Bihari Nayak							

Name of the Parameters	Total Bacteria count	Total Coliform	Faecal Coliform	E. coli	Enterococcus	Salmonella	Shigella	Vibrio
Unit	CFU/ml	MPN/100ml	MPN/100ml	MPN/100ml	CFU/ml	/100ml	/100ml	/100ml
Testing Method	APHA 5 <sup>th</sup> Edn	APHA 9221 B	APHA 9221 E	APHA 9221 F	IS 5887(Part-II)	IS 5887(Part-III)	IS 5887(Part-VII)	IS 5887(Part-V)

### Analysis Result

S-1	Surface Water	64.0	<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	6.6	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	140.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-3	Surface Water	110.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	121.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-4	Surface Water	96.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	84.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-5	Surface Water	75.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	45.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-6	Surface Water	107.0	<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-7	Surface Water	154.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	49.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent

Prepared By -



Checked By-

*A. K. Ray*

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1956PTC023037]  
T : (0674) 2360917, 9777450189  
F : (0674) 2362918



TESTING & INSPECTION

Date: 05.04.2024

## PRIMARY PRODUCTIVITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha
Work Order No.	4802036272
Reference No.	MSKG1/ED/2023-24/00200
Type of Sample	Marine Sample (Productivity)
Date of Sampling	16.03.2024
Date of Analysis	16.03.2024 to 05.04.2024
Sampling Done by	Mr. Kunja Bibari Nayak

Sl. No.	Monitoring Location	Gross Primary productivity (O <sub>2</sub> mg/l./day)	Net Primary productivity (O <sub>2</sub> mg/l./day)
1	S1:Dhamra River Mouth	Surface Water	1.8
		Bottom water	1.7
2	S2:Dry Bulk Cargo Berth Face	Surface Water	2.8
		Bottom water	1.6
3	S3:Liquid/Gas/Cryogenic Berth Face	Surface Water	2.2
		Bottom water	2.4
4	S4:Along Channel at 1Km	Surface Water	2.1
		Bottom water	1.8
5	S5:Along Chanel at 5Km	Surface Water	2.4
		Bottom water	1.3
6	S6: Along Channel at 10Km	Surface Water	2.7
		Bottom water	1.9
7	S7:Near Kanika Island	Surface Water	2.2
		Bottom water	1.6

Prepared By



Checked By

A. M. Dey

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
(CIN: U51909WB1956PTC023037)  
T : (0674) 2360917, 9777450189  
F : 0674-2362918



Date: 05.04.2024

## PHYTO BENTHOS MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha				
Work Order No.	4802036272				
Reference No.	MSKGL/ED/2023-24/00200				
Type of Sample	Marine Sample				
Sampling Location	S1:Dhamra River Mouth      S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face      S4:Along Channel at 1Km S5:Along Chanel at 5Km      S6: Along Channel at 10Km S7:Near Kanika Island				
Date of Sampling	16.03.2024				
Date of Analysis	16.03.2024 to 05.04.2024				
Sampling Done by	Mr. Kunja Bihari Nayak				

Name of the Parameters	Fungus	Total Count	No of species	Diversity Index	Major species
Unit	CFU/g dry wt.	50 mg wet sediment	Nos.	--	--
Testing Method	APHA 9610 B	APHA 9215 B.C	APHA 10500 B	By Calculation (Shanon's Index)	APHA 10500 B
Analysis Result					
S-1	Surface Water	1544	167	8	0.4227 Copepods
	Bottom water	2058	190	9	N.longsigma
S-2	Surface Water	2160	210	14	Ctenophora,
	Bottom water	1990	140	18	Ditylum
S-3	Surface Water	1420	120	10	Ctenophora, Ditylum,
	Bottom water	1510	166	6	Podasira
S-4	Surface Water	1840	220	5	Ditylum, N.longsigma
	Bottom water	1940	190	9	Ditylum, Echinodermata
S-5	Surface Water	1440	230	3	Podasira, Copepods
	Bottom water	2200	240	20	Ditylum, Echinodermata
S-6	Surface Water	2540	340	12	Podasira, Copepods
	Bottom water	1970	168	15	Ctenophora, Podasira
S-7	Surface Water	1660	180	12	Ditylum, Podasira
	Bottom water	1800	155	11	Podasira N.longsigma

Prepared By -



*A. K. Ray*  
Checked By-

Plot No-687/2428, Ekamra Villa Square,  
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Date: 06.01.2024

**TOTAL FAUNA MONITORING REPORT**

<b>Client Name &amp; Address</b>	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha			
<b>Work Order No.</b>	4802036272			
<b>Reference No.</b>	MSKGL/ED/2023-24/00200			
<b>Type of Sample</b>	Marine Sample			
<b>Sampling Location</b>	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			
<b>Date of Sampling</b>	16.03.2024			
<b>Date of Analysis</b>	16.03.2024 to 05.04.2024			
<b>Sampling Done by</b>	Mr. Kunja Bihari Nayak			

Name of the Parameters	Name of phylum	Class & No. of individuals encountered	Total no of species encountered	Total fauna per m <sup>2</sup>
Testing Method	APHA 10700	APHA 10700	APHA 10700	APHA 10700
<b>Analysis Result</b>				
S-1	Surface Water	Annelida, Mollusca	Plychaeta-38,Bivalvia-22	36
	Bottom water	Annelida, Mollusca	Plychaeta-68,Bivalvia-19	24
S-2	Surface Water	Annelida, Mollusca	Plychaeta-54,Bivalvia-12	42
	Bottom water	Annelida, Mollusca	Plychaeta-90,Bivalvia-28	74
S-3	Surface Water	Anthropoda, Annelida	Plychaeta-76,Bivalvia-32	141
	Bottom water	Annelida, Mollusca	Plychaeta-25,Bivalvia-16	68
S-4	Surface Water	Annelida, Mollusca	Plychaeta-44,Bivalvia-21	180
	Bottom water	Annelida, Mollusca	Plychaeta-34,Bivalvia-09	54
S-5	Surface Water	Annelida, Mollusca	Plychaeta-30,Bivalvia-11	157
	Bottom water	Annelida, Mollusca	Plychaeta-94,Bivalvia-24	129
S-6	Surface Water	Anthropoda, Annelida	Malagostraca-12,Pelecypoda-36	144
	Bottom water	Annelida, Mollusca	Plychaeta-96,Gastropoda-57	170
S-7	Surface Water	Anthropoda, Annelida	Malagostraca-22,Pelecypoda-14	66
	Bottom water	Anthropoda, Annelida	Plychaeta-35,Gastropoda-19	52

Prepared By -


  
Checked By:

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
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## TEST REPORT

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

Report No. : BBS/416  
 Date : 05.04.2024  
 Sample No. : MSKGL/ED/2023-24/03/00100  
 Sample Description : Sea Sediment  
 Sampling Location : Dredging Disposal Site  
 Date of sampling : 04.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987; Rffm:2011	7.22
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984; Rffm:2006	2400.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.75
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	160.0
5.	Moisture content	%	Lab Method	28.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	4051.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	233.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	mg/kg	TPM/MSK/P&E/1/12	10.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	190.0
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	2315.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	170.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	16.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	32.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	20.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	180.0

Ref. No. BBS/416

Date- 05.04.2024

18.	Lend (as Pb)	mg/kg	EPA 6010D	8.0
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	<5.0
20.	Aluminium ( as Al )	mg/kg	EPA 6010D	1700.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	12.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); RINm:2014	308.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	396.0
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	26.0
28.	Clay	None	TPM/MSK/P&E/1/36A	40.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1340
2.	Total count (Phytobenthos)	50 mg wet sediment	280
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	1.55
5.	Major Species (phytobenthos)	----	<i>Coseinodiscus sp., Biddulphia mobilensis</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-40, Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	16
9.	Total fauna (Fauna)	per m <sup>3</sup>	140

Report Prepared by:



For Mitra S.K. Private Limited

  
Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
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[CIN: U51909WB1956PTC023037]

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## TEST REPORT

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

Report No. : BBS/417  
 Date : 05.04.2024  
 Sample No. : MSKGL/ED/2023-24/03/00101  
 Sample Description : Sea Sediment  
 Sampling Location : Dredging Area  
 Date of sampling : 04.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rf/m:2011	7.32
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rf/m:2006	2461.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rf/m:2015	0.66
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	134.0
5.	Moisture content	%	Lab Method	18.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	4281.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	1560.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	mg/kg	TPM/MSK/P&E/1/12	16.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	234.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	412.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	3660.0
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	32.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	20.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	266.0

Ref. No. BBS/417

Date: 05.04.2024

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	1875.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	16.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); RfM:2014	472.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	271.0
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	25.0
28.	Clay	None	TPM/MSK/P&E/1/36A	30.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1780
2.	Total count (Phytobenthos)	50 mg wet sediment	350
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	1.94
5.	Major Species (phytobenthos)	----	<i>Coscinodiscus</i> sp
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 <sup>3</sup>	128

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
 Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
 Bhubaneswar, Khordha, Odisha-751015  
 [CIN: U51909WB1956PTC023037]  
 T : (0674) 2360917, 9777460189  
 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 : 05.04.2024  
 Sample No. : MSKGL/ED/2023-24/03/00102  
 Sample Description : Sea Sediment  
 Sampling Location : Dredging Disposal Site  
 Date of sampling : 16.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rf/m:2011	7.44
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rf/m:2006	3580.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rf/m:2015	0.40
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	42.0
5.	Moisture content	%	Lab Method	26.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1987.0
7.	Sulphate (as SO <sub>4</sub> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	177.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> )	mg/kg	TPM/MSK/P&E/1/12	16.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	28.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	32.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1518.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	180.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	26.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	17.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	14.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	170.0

Ref. No. BBS/418

Date: 05.04.2024

18.	Lead (as Pb)	mg/kg	EPA 6010D	9.0
19.	Boron (as B)	mg/kg	IS 13428-2005, Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	2370.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	10.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); R/TM:2014	457.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	290.0
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.	Clay	None	TPM/MSK/P&E/1/36A	36.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

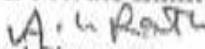
Biological Result

SL No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1742
2.	Total count (Phytobenthos)	50 mg wet sediment	270
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	----	1.66
5.	Major Species (phytobenthos)	----	<i>Btddulphia mobiliensis, Spirulina aeruginosa</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeia-60, Bivalvia-31
8.	Total no. of species encountered (Fauna)	Nos.	38
9.	Total fauna (Fauna)	per m <sup>3</sup>	266

Report Prepared by:



For Mitra S.K. Private Limited

  
Authorized Signatory

# Mitra S. K. Private Limited

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

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## TEST REPORT

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

Report No. : BBS/419  
Date : 05.04.2024  
Sample No. : MSKGL/ED/2023-24/03/00103  
Sample Description : Sea Sediment  
Sampling Location : Dredging Area  
Date of sampling : 16.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rf/m:2011	7.44
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rf/m:2006	3189.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rf/m:2015	0.60
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	45.0
5.	Moisture content	%	Lab Method	18.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	3587.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	198.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	mg/kg	TPM/MSK/P&E/1/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	11.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	24.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1720.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	191.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	19.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	20.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	28.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	160.0

Ref. No. BBS/419

Date- 05.04.2024

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	1790.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	30.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfim:2014	234.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	209.0
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/I/36A	44.0
27.	Silt	%	TPM/MSK/P&E/I/36A	36.0
28.	Clay	None	TPM/MSK/P&E/I/36A	20.0
29.	Texture	%	TPM/MSK/P&E/I/36A	Clay Loam

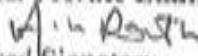
Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1410
2.	Total count (Phytobenthos)	50 mg wet sediment	280
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	2.44
5.	Major Species (phytobenthos)	----	<i>Biddulphia mobilenis, Nitella distans</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-48, Bivalvia-30
8.	Total no. of species encountered (Fauna)	Nos.	26
9.	Total fauna (Fauna)	per m <sup>2</sup>	190

Report Prepared by:



For Mitra S.K. Private Limited

  
 Authorized Signatory

# Mitra S. K. Private Limited

Plot No-887/2428, Ekamra Villa Square,  
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[CIN: U51909WB1956PTC023037]

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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. : BHS/420  
 Date : 05.04.2024  
 Sample No. : MSKGL/ED/2023-24/03/00104  
 Sample Description : Sea Sediment  
 Sampling Location : Dhamra River Mouth  
 Date of sampling : 16.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987; Rf/m:2011	7.22
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984; Rf/m:2006	4870.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rf/m:2015	2.6
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	32.0
5.	Moisture content	%	Lab Method	18.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	1500.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	372.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	3.8
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	6.4
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2915.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	372.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	5.6
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.9
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.4
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/420

Date- 05.04.2024

18.	Lead (as Pb)	mg/kg	EPA 6010D	7.4
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	9.1
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); Rfim:2014	12.4
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	14.8
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	28.0
28.	Clay	None	TPM/MSK/P&E/1/36A	37.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Clay Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1505
2.	Total count (Phytobenthos)	50 mg wet sediment	190
3.	No of species (Phytobenthos)	Nos.	10
4.	Diversity index (Phytobenthos)	----	0.8217
5.	Major Species (phytobenthos)	----	<i>Cercozoa</i> , <i>Coelomodiscus</i> , <i>Pleurosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Polychaeta-48, Bivalvia-20
8.	Total no. of species encountered (Fauna)	Nos.	24
9.	Total fauna (Fauna)	per m <sup>3</sup>	140

Report Prepared by:



For Mitra S.K. Private Limited

  
Authorized Signatory


# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1958PTC023037]

T : (0674) 2380917, 9777450189  
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## TEST REPORT

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

Report No. : BDS/421  
Date : 05.04.2024  
Sample No. : MSKGL/ED/2023-24/03/00105  
Sample Description : Sea Sediment  
Sampling Location : Dry Bulk Cargo Berth Face  
Date of sampling : 16.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;R&M:2011	7.77
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;R&M:2006	2270.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; R&M:2015	2.1
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	22.0
5.	Moisture content	%	Lab Method	34.0
6.	Chloride (as Cl )	mg/kg	TPM/MSK/P&E/1/10	2509.0
7.	Sulphate (as SO <sub>4</sub> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	296.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> )	mg/kg	TPM/MSK/P&E/1/12	12.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	18.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	9.4
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2704.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	321.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	2.9
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.8
16.	Zinc (as Zn)	mg/kg	EPA 6010D	8.2
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

18.	Lead (as Pb)	mg/kg	EPA 6010D	4.7
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	12.8
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); Rffm:2014	12.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	9.1
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb, 2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	46.0
27.	Silt	%	TPM/MSK/P&E/1/36A	30.0
28.	Clay	None	TPM/MSK/P&E/1/36A	24.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

**Biological Result**

Sl No.	Parameters	Unit	Results
1.	Fungus (Phyto benthos)	CFU/g dry wt.	1910
2.	Total count (Phyto benthos)	50 mg wet sediment	230
3.	No of species (Phyto benthos)	Nos.	7
4.	Diversity index (Phyto benthos)	----	0.6975
5.	Major Species (phytobenthos)	----	<i>Navicula, Coscinodiscuss,</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-50, Bivalvia-22
8.	Total no. of species encountered (Fauna)	Nos.	28
9.	Total fauna (Fauna)	per m <sup>3</sup>	220

Report Prepared by:



For Mitra S.K. Private Limited

A. M. Dutt  
Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
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[CIN: U51909WB1958PTC023037]

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## TEST REPORT

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

Report No. : BBS/422  
Date : 05.04.2024  
Sample No. : MSKGL/ED/2023-24/03/00106  
Sample Description : Sea Sediment  
Sampling Location : Liquid/Gas/Cyrogenic Berth Face  
Date of sampling : 16.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.66
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rffm:2006	3312.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	3.8
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	40.0
5.	Moisture content	%	Lab Method	26.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	1533.0
7.	Sulphate (as SO <sub>4</sub> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	6.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> )	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	8.1
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1170.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	210.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	2.9
15.	Nickel (as Ni)	mg/kg	EPA 6010D	3.8
16.	Zinc (as Zn)	mg/kg	EPA 6010D	8.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/422

Date- 05.04.2024

18.	Lead (as Pb)	mg/kg	EPA 6010D	7.2
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	2.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	9.4
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.4
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	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.	1700
2.	Total count (Phytobenthos)	50 mg wet sediment	260
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	0.4120
5.	Major Species (phytobenthos)	----	<i>Bidulphia, Pleurosigma,</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-58, Bivalvia-20
8.	Total no. of species encountered (Fauna)	Nos.	34
9.	Total fauna (Fauna)	per m <sup>3</sup>	230

Report Prepared by:



For Mitra S.K. Private Limited

V. C. Dasgupta  
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/423  
 Date : 05.04.2024  
 Sample No. : MSKGL/ED/2023-24/03/00107  
 Sample Description : Sea Sediment  
 Sampling Location : Along Channel at 1 km  
 Date of sampling : 16.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rf/m:2011	7.54
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rf/m:2006	3425.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rf/m:2015	2.4
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	26.0
5.	Moisture content	%	Lab Method	32.0
6.	Chloride (as Cl )	mg/kg	TPM/MSK/P&E/1/10	1746.0
7.	Sulphate (as SO <sub>4</sub> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	520.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> )	mg/kg	TPM/MSK/P&E/1/12	10.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	6.4
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	22.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2901.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	260.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	1.9
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.8
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.6
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/423

Date- 05.04.2024

18.	Lead (as Pb)	mg/kg	EPA 6010D	1.5
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	5.9
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	1.5
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfim:2014	14.6
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	13.1
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec, 1996, 8270 D - Feb, 2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/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	Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1424
2.	Total count (Phytobenthos)	50 mg wet sediment	220
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	0.4080
5.	Major Species (phytobenthos)	----	<i>Bidulphia, Gyrosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-70, Bivalvia-32
8.	Total no. of species encountered (Fauna)	Nos.	14
9.	Total fauna (Fauna)	per m <sup>3</sup>	270

Report Prepared by:



For Mitra S.K. Private Limited

  
Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
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## TEST REPORT

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

Report No. : BBS/424  
 Date : 05.04.2024  
 Sample No. : MSKGL/ED/2023-24/03/00108  
 Sample Description : Sea Sediment  
 Sampling Location : Along Channel at 5 km  
 Date of sampling : 16.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rf/mn:2011	7.33
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rf/mn:2006	3325.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rf/mn:2015	2.5
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	50.0
5.	Moisture content	%	Lab Method	36.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	610.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	380.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	8.2
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	14.6
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2724.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	230.0
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	12.1
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/424

Date- 05.04.2024

18.	Lead (as Pb)	mg/kg	EPA 6010D	3.4
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	2.1
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	4.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	21.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	7.8
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.	Slit	%	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 Loam

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1740
2.	Total count (Phytobenthos)	50 mg wet sediment	268
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	1.4780
5.	Major Species (phytobenthos)	----	<i>Navicula, Gyrosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-60, Bivalvia-27
8.	Total no. of species encountered (Fauna)	Nos.	54
9.	Total fauna (Fauna)	per m <sup>3</sup>	190

Report Prepared by:



For Mitra S.K. Private Limited  
  
 Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
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Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1956PTC023037]

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## TEST REPORT

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

Report No. : BBS/425  
Date : 05.04.2024  
Sample No. : MSKGL/ED/2023-24/03/00109  
Sample Description : Sea Sediment  
Sampling Location : Along Channel at 10 km  
Date of sampling : 16.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987; Rf/m:2011	7.22
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984; Rf/m:2006	3118.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rf/m:2015	6.6
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	30.0
5.	Moisture content	%	Lab Method	34.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	1294.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	410.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	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	10.4
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2344.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	1580.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	3.4
15.	Nickel (as Ni)	mg/kg	EPA 6010D	2.1
16.	Zinc (as Zn)	mg/kg	EPA 6010D	15.2
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/425

Date- 05.04.2024

18.	Lead (as Pb)	mg/kg	EPA 6010D	3.1
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	5.8
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	5.4
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rf/Tm:2014	14.1
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	6.8
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	284
3.	No of species (Phytobenthos)	Nos.	14
4.	Diversity index (Phytobenthos)	----	1.7140
5.	Major Species (phytobenthos)	----	<i>Synedra, Coecinodiscus sp.,</i>
6.	Name of Phylum (Fauna)	----	<i>Anthropoda, Annelida</i>
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-70, Bivalvia-31
8.	Total no. of species encountered (Fauna)	Nos.	44
9.	Total fauna (Fauna)	per m <sup>3</sup>	250

Report Prepared by:

For Mitra S.K. Private Limited

  
Authorized Signatory


# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
 Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
 Bhubaneswar, Khordha, Odisha-751016  
 [CIN: U51909WB1956PTC023037]  
 T : (0674) 2360017, 9777450189  
 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/426  
 Date : 05.04.2024  
 Sample No. : MSKGL/ED/2023-24/03/00110  
 Sample Description : Sea Sediment  
 Sampling Location : Near Kanika Island  
 Date of sampling : 16.03.2024

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.780
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rffm:2006	3400.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	4.2
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	18.0
5.	Moisture content	%	Lab Method	14.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	527.0
7.	Sulphate (as SO <sub>4</sub> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	2420.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> )	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	8.6
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2478.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	222.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	5.9
15.	Nickel (as Ni)	mg/kg	EPA 6010D	3.4
16.	Zinc (as Zn)	mg/kg	EPA 6010D	6.2
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Ref. No. BBS/426

Date- 05.04.2024

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.7
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	6.2
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rifm:2014	10.2
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	5.8
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	Loam

**Biological Results**

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1610
2.	Total count (Phytobenthos)	50 mg wet sediment	290
3.	No of species (Phytobenthos)	Nos.	14
4.	Diversity index (Phytobenthos)	----	1.3165
5.	Major Species (phytobenthos)	----	<i>Bidulphia, Navicula</i>
6.	Name of Phylum (Fauna)	----	Anthropoda, Annelida
7.	Class & Number of individuals encountered (Fauna)	----	Malacostraca-49, Pelecypoda-10
8.	Total no. of species encountered (Fauna)	Nos.	36
9.	Total fauna (Fauna)	per m <sup>3</sup>	340

Report Prepared by:



For Mitra S.K. Private Limited

V. K. Dutt  
Authorized Signatory

Date: 06.01.2024

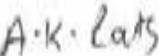
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**ZOOPLANKTON MONITORING REPORT**

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha		
Work Order No.	4802036272		
Reference No.	MSKGL/ED/2023-24/00700		
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/Cyrogenic Berth Face S4:Along Channel at 1Km S6: Along Channel at 10Km	
Date of Sampling	23.12.2023		
Date of Analysis	23.12.2023 to 06.01.2024		
Sampling Done by	Mr. Kunja Bihari Nayak		

Name of the Parameters	Total count	No of species	Major Species	
Unit	Units/L	Nos.	----	
Testing Method	APIA 10200	APIA 10200	APIA (23 <sup>rd</sup> Edition) 10200	
Analysis Result				
S-1	Surface Water	None	None	
	Bottom water	None	None	
S-2	Surface Water	None	None	
	Bottom water	2500	8 Daphnia	
S-3	Surface Water	None	None	
	Bottom water	1600	6 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 - Checked By- 

# Mitra S. K. Private Limited



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Date: 06.01.2024

## PHYTOPLANKTON MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha		
Work Order No.	4802036272		
Reference No.	MSKGL/ED/2023-24/00700		
Type of Sample	Marine Sample (Phytoplankton)		
Sampling Location	S1:Dhamra River Mouth S2:Dry Bulk Cargo Berth Face S3:Along Chanel at 5Km S4:Along Channel at 1Km S5:Along Chanel at 10Km S6: Along Channel at 10Km S7:Near Kanika Island	S3:Liquid/Gas/Cyrogenic Berth Face	S4:Along Channel at 1Km
Date of Sampling	23.12.2023	S5:Along Chanel at 5Km	S6: Along Channel at 10Km
Date of Analysis	23.12.2023 to 06.01.2024	S7:Near Kanika Island	
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 <sup>rd</sup> Edition) 10200
Analysis Result				
S-1	Surface Water	18000	6	0.64
	Bottom water	17000	8	0.71
S-2	Surface Water	22000	4	0.58
	Bottom water	12000	7	0.91
S-3	Surface Water	14000	5	Cyclotella, Moueotia
	Bottom water	16000	2	Nereocystis, Cyclotella
S-4	Surface Water	10000	9	Navicula, Fragilaria
	Bottom water	22000	6	Nereocystis, Zostera
S-5	Surface Water	23000	5	Moueotia, Cyclotella
	Bottom water	19000	6	Enteromorpha, Navicula
S-6	Surface Water	13000	9	Phormidium, Calothrix
	Bottom water	26000	3	Phormidium a, Enteromorpha
S-7	Surface Water	9000	8	Cyclotella, Moueotia
	Bottom water	27000	4	Phormidium, Calothrix

Prepared By -



Checked By -

# Mitra S. K. Private Limited



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Date: 06.01.2024

## TOTAL FAUNA MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha			
Work Order No.	4802036272			
Reference No.	MSKGL/ED/2023-24/00700			
Type of Sample	Marine Sample			
Sampling Location	S1:Dhamra River Mouth      S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face      S4:Along Channel at 1Km S5:Along Chanel at 5Km      S6: Along Channel at 10Km S7:Near Kanika Island			
Date of Sampling	23.12.2023			
Date of Analysis	23.12.2023 to 06.01.2024			
Sampling Done by	Mr. Kunja Bihari Nayak			

Name of the Parameters	Name of phylum	Class & No. of individuals encountered	Total no of species encountered	Total fauna per m <sup>3</sup>	
Testing Method	APHA 10700	APHA 10700	APHA 10700	APHA 10700	
<b>Analysis Result</b>					
S-1	Surface Water	Annelida, Mollusca	Plychaeta-38,Bivalvia-22	36	150
	Bottom water	Annelida, Mollusca	Plychaeta-68,Bivalvia-19	24	124
S-2	Surface Water	Annelida, Mollusca	Plychaeta-54,Bivalvia-12	42	160
	Bottom water	Annelida, Mollusca	Plychaeta-90,Bivalvia-28	74	231
S-3	Surface Water	Anthropoda, Annelida	Plychaeta-76,Bivalvia-32	141	267
	Bottom water	Annelida, Mollusca	Plychaeta-25,Bivalvia-16	68	224
S-4	Surface Water	Annelida, Mollusca	Plychaeta-44,Bivalvia-21	180	328
	Bottom water	Annelida, Mollusca	Plychaeta-34,Bivalvia-09	54	139
S-5	Surface Water	Annelida, Mollusca	Plychaeta-30,Bivalvia-11	157	322
	Bottom water	Annelida, Mollusca	Plychaeta-94,Bivalvia-24	129	240
S-6	Surface Water	Anthropoda, Annelida	Malacostraca-42,Pelecypoda-36	144	367
	Bottom water	Annelida, Mollusca	Plychaeta-96,Gastropoda-57	170	412
S-7	Surface Water	Anthropoda, Annelida	Malagostraca-22,Pelecypoda-14	66	168
	Bottom water	Anthropoda, Annelida	Plychaeta-35,Gastropoda-19	52	327

Prepared By - C.Kamal



Checked By - A.K.Lata

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**PHOTO BENTHOS MONITORING REPORT**

<b>Client Name &amp; Address</b>	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha				
<b>Work Order No.</b>	4802036272				
<b>Reference No.</b>	MSKGL/ED/2023-24/00700				
<b>Type of Sample</b>	Marine Sample				
<b>Sampling Location</b>	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				
<b>Date of Sampling</b>	23.12.2023				
<b>Date of Analysis</b>	23.12.2023 to 06.01.2024				
<b>Sampling Done by</b>	Mr. Kunja Bihari Nayak				

Name of the Parameters	Fungus	Total Count	No of species	Diversity Index	Major species
Unit	CFU/g dry wt.	50 mg wet sediment	Nos.	--	--
Testing Method	APHA 9610 B	APHA 9215 B.C	APHA 10500 B	By Calculation (Shanon's Index)	APHA 10500 B
<b>Analysis Result</b>					
S-1	Surface Water	1544	167	8	Copepods
	Bottom water	2058	190	9	N.longsigma
S-2	Surface Water	2160	210	14	Ctenophora,
	Bottom water	1990	140	18	Ditylum
S-3	Surface Water	1420	120	10	Ctenophora, Ditylum,
	Bottom water	1510	166	6	Podasira
S-4	Surface Water	1840	220	5	Ditylum, N.longsigma
	Bottom water	1940	190	9	Ditylum, Echinodermata
S-5	Surface Water	1440	230	3	Podasira, Copepods
	Bottom water	2200	240	20	Ditylum, Echinodermata
S-6	Surface Water	2540	340	12	Podasira, Copepods
	Bottom water	1970	168	15	Ctenophora, Podasira
S-7	Surface Water	1660	180	12	Ditylum, Podasira
	Bottom water	1800	155	11	Podasira N.longsigma

Prepared By -



Checked By -

# Mitra S. K. Private Limited



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Date: 06.01.2024

## PRIMARY PRODUCTIVITY MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosingu, Bhadrak, Odisha
Work Order No.	4802036272
Reference No.	MSKGL/ED/2023-24/00700
Type of Sample	Marine Sample (Productivity)
Date of Sampling	23.12.2023
Date of Analysis	23.12.2023 to 06.01.2024
Sampling Done by	Mr. Kunja Bihari Nayak

Sl. No.	Monitoring Location	Gross Primary productivity (O <sub>2</sub> mg/L/day)	Net Primary productivity (O <sub>2</sub> mg/L/day)
1	S1:Dhamra River Mouth	Surface Water	1.6
		Bottom water	2.4
2	S2:Dry Bulk Cargo Berth Face	Surface Water	2.1
		Bottom water	1.9
3	S3:Liquid/Gas/Cyrogenic Berth Face	Surface Water	2.6
		Bottom water	1.4
4	S4:Along Channel at 1Km	Surface Water	2.5
		Bottom water	1.3
5	S5:Along Chanel at 5Km	Surface Water	2.8
		Bottom water	1.6
6	S6: Along Channel at 10Km	Surface Water	2.3
		Bottom water	1.5
7	S7:Near Kanika Island	Surface Water	2.7
		Bottom water	1.5

Prepared By - *C. Kanji*



Checked By - *A.K. Ralgi*

# Mitra S. K. Private Limited



Plot No-687/2428, Ekamra Villa Square,  
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Date: 06.01.2024

## MICROBIOLOGICAL MONITORING REPORT

Client Name & Address	M/s The Dhamra Port Company Limited, Dosinga, Bhadrak, Odisha							
Work Order No.	4802036272							
Reference No.	MSKGL/ED/2023-24/00700							
Type of Sample	Marine Sample (Microbiological)							
Sampling Location	S1:Dhamra River Mouth      S3:Liquid/Gas/Cyrogenic Berth Face S2:Dry Bulk Cargo Berth Face      S4:Along Channel at 1Km S5:Along Chanel at 5Km      S6: Along Channel at 10Km S7:Near Kanika Island							
Date of Sampling	23.12.2023							
Date of Analysis	23.12.2023 to 06.01.2024							
Sampling Done by	Mr. Kunja Bihari Nayak							

Name of the Parameters	Total Bacteria count	Total Coliform	Faecal Coliform	E. coli	Enterococcus	Salmonella	Shigella	Vibrio
Unit	CFU/ml	MPN/100ml	MPN/100ml	MPN/100ml	CFU/ml	/100ml	/100ml	/100ml
Testing Method	APHA 5 <sup>th</sup> Edn	APHA 9221 B	APHA 9221 E	APHA 9221 F	IS 5887(Part-II)	IS 5887(Part-III)	IS 5887(Part-VII)	IS 5887(Part-V)

### Analysis Result

S-1	Surface Water	77.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	84.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-2	Surface Water	110.0	6.6	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	150.0	<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	135.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-4	Surface Water	98.0	<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-5	Surface Water	64.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	45.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-6	Surface Water	101.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	87.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
S-7	Surface Water	150.0	<1.8	<1.8	<1.8	<1.0	Absent	Absent	Absent
	Bottom water	50.0	5.1	<1.8	<1.8	<1.0	Absent	Absent	Absent

Prepared By - S. K. Nayak

Checked By - A.K. Raut

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## TEST REPORT

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

Report No. : BBS/416  
Date : 06.01.2024  
Sample No. : MSKGL/ED/2023-24/12/00100  
Sample Description : Sea Sediment  
Sampling Location : Dredging Disposal Site  
Date of sampling : 04.12.2023

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
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	2391.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.69
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	154.0
5.	Moisture content	%	Lab Method	22.0
6.	Chloride (as Cl )	mg/kg	TPM/MSK/P&E/I/10	4721.0
7.	Sulphate (as SO <sub>4</sub> )	mg/kg	IS 2720 (Part 27) 1977,RA 2015	287.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/I/43	<5.0
9.	Phosphate (as PO <sub>4</sub> )	mg/kg	TPM/MSK/P&E/I/12	8.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/I/12	196.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/I/13	231.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/I/4	2296.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/I/5	166.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	14.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	30.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	18.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	184.0

Ref. No. BBS/416

Date- 06.01.2024

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	1628.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	10.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rffm:2014	317.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	430.0
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	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.	1328
2.	Total count (Phytobenthos)	50 mg wet sediment	266
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	1.77
5.	Major Species (phytobenthos)	----	<i>Coscinodiscus sp., Biddulphia mobilensis</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-37, Bivalvia-19
8.	Total no. of species encountered (Fauna)	Nos.	14
9.	Total fauna (Fauna)	per m <sup>3</sup>	138

Report Prepared by:



For Mitra S.K. Private Limited

  
Authorized Signatory

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## TEST REPORT

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

**Report No. :** BBS/417  
**Date :** 06.01.2024  
**Sample No. :** MSKGL/ED/2023-24/12/00101  
**Sample Description :** Sea Sediment  
**Sampling Location :** Dredging Area  
**Date of sampling :** 04.12.2023

### ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.22
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rffm:2006	2341.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	0.62
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	128.0
5.	Moisture content	%	Lab Method	16.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/I/10	4541.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	1420.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/I/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	mg/kg	TPM/MSK/P&E/I/12	14.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/I/12	220.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/I/13	442.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/I/4	3650.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/I/5	190.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	12.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	30.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	18.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	272.0

Ref. No. BBS/417

Date- 06.01.2024

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	1905.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	14.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfim:2014	466.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	268.0
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	25.0
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.	1784
2.	Total count (Phytobenthos)	50 mg wet sediment	348
3.	No of species (Phytobenthos)	Nos.	7
4.	Diversity index (Phytobenthos)	----	1.89
5.	Major Species (phytobenthos)	----	<i>Coscinodiscus</i> sp
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	---	Plychaeta-32, Bivalvia-21
8.	Total no. of species encountered (Fauna)	Nos.	14
9.	Total fauna (Fauna)	per m <sup>3</sup>	120

Report Prepared by:

*S. Kamal*

For Mitra S.K. Private Limited

*A.K. Rath*  
Authorized Signatory

# Mitra S. K. Private Limited



Plot No-687/2429, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U61909WB1956PTC023037]

T : (0674) 2360917, 9777450189  
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 : 06.01.2024  
Sample No. : MSKGL/ED/2023-24/12/00102  
Sample Description : Sea Sediment  
Sampling Location : Dredging Disposal Site  
Date of sampling : 23.12.2023

### ANALYSIS RESULT

SL No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rf/m:2011	7.28
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rf/m:2006	3610.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rf/m:2015	0.38
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	44.0
5.	Moisture content	%	Lab Method	24.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/I/10	1927.0
7.	Sulphate (as SO <sub>4</sub> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	187.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/I/43	<5.0
9.	Phosphate (as PO <sub>4</sub> )	mg/kg	TPM/MSK/P&E/I/12	14.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/I/12	26.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/I/13	30.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/I/4	1428.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/I/5	179.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	24.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	18.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	12.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	160.0

Date- 06.01.2024

Ref. No. BBS/418				
18.	Lead (as Pb)	mg/kg	EPA 6010D	7.0
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	2278.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	8.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfim:2014	447.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	289.0
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.	Clay	None	TPM/MSK/P&E/1/36A	36.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1740
2.	Total count (Phytobenthos)	50 mg wet sediment	268
3.	No of species (Phytobenthos)	Nos.	8
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)	----	Plychaeta-49, Bivalvia-29
8.	Total no. of species encountered (Fauna)	Nos.	34
9.	Total fauna (Fauna)	per m <sup>3</sup>	260

C. Kamal  
Report Prepared by:



For Mitra S.K. Private Limited

A. K. Lat  
Authorized Signatory

# Mitra S. K. Private Limited



Plot No-587/2428, Ekamra Villa Square,  
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Bhubaneswar, Khordha, Odisha-751015  
(CIN: U51909WB1956PTC023037)

T : (0674) 2360917, 9777450189  
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/419  
Date : 06.01.2024  
Sample No. : MSKGL/ED/2023-24/12/00103  
Sample Description : Sea Sediment  
Sampling Location : Dredging Area  
Date of sampling : 23.12.2023

## ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rfim:2011	7.51
2.	Electrical Conductivity	µS/cm	IS 3025 (Part 14)-1984;Rfim:2006	3289.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rfim:2015	0.54
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	41.0
5.	Moisture content	%	Lab Method	16.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/I/10	3687.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	194.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/I/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	mg/kg	TPM/MSK/P&E/I/12	<3.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/I/12	10.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/I/13	20.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/I/4	1640.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/I/5	180.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	17.0
15.	Nickel (as Ni)	mg/kg	EPA 6010D	22.0
16.	Zinc (as Zn)	mg/kg	EPA 6010D	24.0
17.	Manganese (as Mn)	mg/kg	EPA 6010D	152.0

Continuation Sheet

Date- 06.01.2024

Ref. No. BBS/419

18.	Lead (as Pb)	mg/kg	EPA 6010D	14.0
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex II	<5.0
20.	Aluminium (as Al)	mg/kg	EPA 6010D	1760.0
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	32.0
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfim:2014	230.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	209.0
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 Loam

### Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1300
2.	Total count (Phytobenthos)	50 mg wet sediment	246
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	2.61
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-50, Bivalvia-38
8.	Total no. of species encountered (Fauna)	Nos.	22
9.	Total fauna (Fauna)	per m <sup>3</sup>	192

Report Prepared by:

For Mitra S.K. Private Limited

A.K. Rath  
Authorized Signatory



# Mitra S. K. Private Limited



Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51900WB1956PTC023037]

T : (0674) 2360917, 9777450189  
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/420  
Date : 06.01.2024  
Sample No. : MSKGL/ED/2023-24/12/00104  
Sample Description : Sea Sediment  
Sampling Location : Dhamra River Mouth  
Date of sampling : 23.12.2023

## ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.45
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rffm:2006	6870.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	2.8
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	30.0
5.	Moisture content	%	Lab Method	16.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1528.0
7.	Sulphate (as SO <sub>4</sub> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	360.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> )	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	3.9
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	5.4
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2845.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	352.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	5.4
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.7
16.	Zinc (as Zn)	mg/kg	EPA 6010D	7.8
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Date- 06.01.2024

Ref. No. BBS/420

18.	Lead (as Pb)	mg/kg	EPA 6010D	8.1
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	9.5
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); RfSm:2014	10.9
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	12.1
24.	Total Petroleum Hydrocarbon	mg/kg	USEPA 8015 B - Dec. 1996, 8270 D - Feb, 2007	<0.05
25.	Pesticide Residue	mg/kg	USEPA 3540 C USEPA 8082	<0.5
26.	Sand	%	TPM/MSK/P&E/1/36A	35.0
27.	Silt	%	TPM/MSK/P&E/1/36A	28.0
28.	Clay	None	TPM/MSK/P&E/1/36A	37.0
29.	Texture	%	TPM/MSK/P&E/1/36A	Loam

Biological Result

Sl.No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1500
2.	Total count (Phytobenthos)	50 mg wet sediment	196
3.	No of species (Phytobenthos)	Nos.	12
4.	Diversity index (Phytobenthos)	----	0.8497
5.	Major Species (phytobenthos)	----	<i>Coscinodiscuss, Pleurosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-40, Bivalvia-12
8.	Total no. of species encountered (Fauna)	Nos.	21
9.	Total fauna (Fauna)	per m <sup>3</sup>	145

*S. Kamal*  
Report Prepared by:



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

# Mitra S. K. Private Limited

Plot No-887/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, ITC Village,  
Bhubaneswar, Khordha, Odisha-751015  
(CIN: U51909WB1956PTC023037)



## TEST REPORT

T : (0674) 2360917, 9777450189  
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/421  
Date : 06.01.2024  
Sample No. : MSKGL/ED/2023-24/12/00105  
Sample Description : Sea Sediment  
Sampling Location : Dry Bulk Cargo Berth Face  
Date of sampling : 23.12.2023

## ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;RfSm:2011	7.69
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;RfSm:2006	2190.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; RfSm:2015	1.8
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	19.0
5.	Moisture content	%	Lab Method	32.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	2429.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	291.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	mg/kg	TPM/MSK/P&E/1/12	12.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	14.0
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	8.9
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2894.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	317.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	2.8
15.	Nickel (as Ni)	mg/kg	EPA 6010D	1.4
16.	Zinc (as Zn)	mg/kg	EPA 6010D	8.9
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet



Ref. No. BBS/421

18.	Lead (as Pb)	mg/kg	EPA 6010D	4.9
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	15.2
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	2.8
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfim:2014	10.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	9.4
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	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.	1930
2.	Total count (Phytobenthos)	50 mg wet sediment	228
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	----	0.6425
5.	Major Species (phytobenthos)	----	<i>Navicula, Coscinodiscuss,</i> <i>Annelida, Mollusca</i>
6.	Name of Phylum (Fauna)	----	
7.	Class & Number of individuals encountered (Fauna)	----	<i>Plychaeta-39, Bivalvia-18</i>
8.	Total no. of species encountered (Fauna)	Nos.	24
9.	Total fauna (Fauna)	per m <sup>3</sup>	215

Report Prepared by:

For Mitra S.K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited



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

## TEST REPORT

T : (0674) 2360917, 9777450189

F : (0674) 2362910

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

Report No. : BBS/422  
Date : 06.01.2024  
Sample No. : MSKGL/ED/2023-24/12/00106  
Sample Description : Sea Sediment  
Sampling Location : Liquid/Gas/Cyrogenic Berth Face  
Date of sampling : 23.12.2023

## 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	µs/cm	IS 3025 (Part 14)-1984;Rffm:2006	3282.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	3.6
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	42.0
5.	Moisture content	%	Lab Method	28.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	1528.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	615.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	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	8.6
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	1294.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	204.0
14.	Copper (as Cu)	mg/kg	EPA 6010D	2.7
15.	Nickel (as Ni)	mg/kg	EPA 6010D	3.4
16.	Zinc (as Zn)	mg/kg	EPA 6010D	8.2
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

Date- 06.01.2024

Ref. No. BBS/422

18.	Lead (as Pb)	mg/kg	EPA 6010D	7.8
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	2.1
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rfslm:2014	8.2
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	3.0
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	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)	CPU/g dry wt.	1690
2.	Total count (Phytobenthos)	50 mg wet sediment	246
3.	No of species (Phytobenthos)	Nos.	6
4.	Diversity index (Phytobenthos)	----	0.3920
5.	Major Species (phytobenthos)	----	<i>Bidulphia, Pleurosigma,</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-54, Bivalvia-28
8.	Total no. of species encountered (Fauna)	Nos.	32
9.	Total fauna (Fauna)	per m <sup>3</sup>	226

*J.K. Amla*  
Report Prepared by:



For Mitra S.K. Private Limited  
*A.K. Deo*  
Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1958PTC023037],

## TEST REPORT

T : (0674) 2360917, 9777450189

F : (0674) 2362918

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

Report No. : BBS/423

Date : 06.01.2023

Sample No. : MSKGL/ED/2023-24/12/00107

Sample Description : Sea Sediment

Sampling Location : Along Channel at 1 km

Date of sampling : 23.12.2023

## ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rfim:2011	7.84
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rfim:2006	3625.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rfim:2015	2.9
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	24.0
5.	Moisture content	%	Lab Method	33.0
6.	Chloride (as Cl)	mg/kg	TPM/MSK/P&E/1/10	1926.0
7.	Sulphate (as SO <sub>4</sub> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	558.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> )	mg/kg	TPM/MSK/P&E/1/12	12.0
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	6.8
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	24.0
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2802.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	258.0
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	7.4
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Date- 06.01.2024

Ref. No. BBS/423

18.	Lead (as Pb)	mg/kg	EPA 6010D	1.8
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	5.6
20.	Aluminium (as Al)	mg/kg	EPA 6010D	BDL
21.	Total Chromium (as Cr)	mg/kg	EPA 6010D	1.7
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); Rflm:2014	13.2
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	11.8
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.	1410
2.	Total count (Phytobenthos)	50 mg wet sediment	218
3.	No of species (Phytobenthos)	Nos.	5
4.	Diversity index (Phytobenthos)	----	0.4910
5.	Major Species (phytobenthos)	----	<i>Bidulphia, Gyrosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-68, Bivalvia-30
8.	Total no. of species encountered (Fauna)	Nos.	12
9.	Total fauna (Fauna)	per m <sup>3</sup>	262

C. Kamal  
Report Prepared by:



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

# Mitra S. K. Private Limited



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

T : (0674) 2360917, 9777450189  
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/424  
Date : 06.01.2024  
Sample No. : MSKGL/ED/2023-24/12/00108  
Sample Description : Sea Sediment  
Sampling Location : Along Channel at 5 km  
Date of sampling : 23.12.2023

## ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.29
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rffm:2006	3285.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	2.8
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	52.0
5.	Moisture content	%	Lab Method	38.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	628.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	396.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	mg/kg	TPM/MSK/P&E/1/12	BDL
10.	Phosphorus	mg/kg	TPM/MSK/P&E/1/12	8.6
11.	Iron (as Fe)	mg/kg	TPM/MSK/P&E/1/13	15.1
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2704.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	210.0
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	12.9
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Continuation Sheet

Date- 01.01.2024

Ref. No. BBS/424

18.	Lead (as Pb)	mg/kg	EPA 6010D	3.9
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	4.2
22.	Total Nitrogen (as N)	mg/kg	IS 14684 (1999); RfI:2014	18.0
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	7.4
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 Loam

#### Biological Result

Sl No.	Parameters	Unit	Results
1.	Fungus (Phytobenthos)	CFU/g dry wt.	1689
2.	Total count (Phytobenthos)	50 mg wet sediment	260
3.	No of species (Phytobenthos)	Nos.	8
4.	Diversity index (Phytobenthos)	---	1.5128
5.	Major Species (phytobenthos)	---	<i>Ngivicula, Gyrosigma</i>
6.	Name of Phylum (Fauna)	----	Annelida, Mollusca
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-58, Bivalvia-27
8.	Total no. of species encountered (Fauna)	Nos.	52
9.	Total fauna (Fauna)	per m <sup>3</sup>	180

S. Kamal  
Report Prepared by:



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

# Mitra S. K. Private Limited



Plot No-887/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
(CIN: U51909WB1958PTC023037)

## TEST REPORT

T : (0674) 2360917, 9777450189

F : (0674) 2362918

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

Report No. : BBS/425

Date : 06.01.2024

Sample No. : MSKGL/ED/2023-24/09/00109

Sample Description : Sea Sediment

Sampling Location : Along Channel at 10 km

Date of sampling : 23.12.2023

## ANALYSIS RESULT

Sl. No.	Parameters	Unit	Test Method	Result
1.	pH value	None	IS 2720 (Part 26)-1987;Rffm:2011	7.39
2.	Electrical Conductivity	µs/cm	IS 3025 (Part 14)-1984;Rffm:2006	3248.0
3.	Organic Matter	%	IS 2720 (Part 22)-1972; Rffm:2015	6.4
4.	Turbidity	N.T.U	APHA (23 <sup>rd</sup> Edition) 2130B	32.0
5.	Moisture content	%	Lab Method	30.0
6.	Chloride (as Cl <sup>-</sup> )	mg/kg	TPM/MSK/P&E/1/10	1354.0
7.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	mg/kg	IS 2720 (Part 27) 1977, RA 2015	408.0
8.	Sulphide (as S)	mg/kg	TPM/MSK/P&E/1/43	<5.0
9.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	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	13.8
12.	Sodium (as Na)	mg/kg	TPM/MSK/P&E/1/4	2324.0
13.	Potassium (as K)	mg/kg	TPM/MSK/P&E/1/5	1620.0
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	12.8
17.	Manganese (as Mn)	mg/kg	EPA 6010D	BDL

Date- 06.01.2024

Ref. No. BBS/425

18.	Lead (as Pb)	mg/kg	EPA 6010D	2.9
19.	Boron (as B)	mg/kg	IS 13428- 2005, Annex H	5.4
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); Rfml:2014	12.1
23.	Organic Nitrogen	mg/kg	TPM/MSK/P&E/3/68	6.2
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.	1830
2.	Total count (Phytobenthos)	50 mg wet sediment	280
3.	No of species (Phytobenthos)	Nos.	12
4.	Diversity index (Phytobenthos)	----	1.8840
5.	Major Species (phytobenthos)	----	<i>Synedra, Coscinodiscuss sp.,</i> <i>Anthropoda, Annelida</i>
6.	Name of Phylum (Fauna)	----	
7.	Class & Number of individuals encountered (Fauna)	----	Plychaeta-72, Bivalvia-31
8.	Total no. of species encountered (Fauna)	Nos.	42
9.	Total fauna (Fauna)	per m <sup>3</sup>	240

*(S.K. Apte)*  
Report Prepared by:



For Mitra S.K. Private Limited  
*A.K. Apte*  
Authorized Signatory

# **Annexure-IC**

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1956PTC023037]  
T : (0674) 2360917, 9777450189  
F : (0674) 2362918



## NOISE LEVEL MONITORING REPORT (February- 2024)

LOCATION	DAY TIME (L <sub>eq</sub> ) in dB (A)	NIGHT TIME (L <sub>eq</sub> ) in dB (A)
COLONY	46.8	38.1
KANAKA PRASAD	48.4	37.6
BMH	58.9	49.5
JETTY	69.4	58.9
DOSINGA	45.2	36.8
BHITARKANIKA	42.9	36.1

## NOISE LEVEL MONITORING REPORT (March- 2024)

LOCATION	DAY TIME (L <sub>eq</sub> ) in dB (A)	NIGHT TIME (L <sub>eq</sub> ) in dB (A)
COLONY	52.8	38.4
KANAKA PRASAD	47.1	37.8
BMH	69.7	50.1
JETTY	72.5	55.7
DOSINGA	42.4	39.3
BHITARKANIKA	40.9	36.4

For Mitra S.K. Private Limited



  
Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1956PTC023037]  
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## NOISE LEVEL MONITORING REPORT (December- 2023)

LOCATION	DAY TIME (L <sub>eq</sub> ) in dB (A)	NIGHT TIME (L <sub>eq</sub> ) in dB (A)
COLONY	50.6	37.5
KANAKA PRASAD	45.3	38.4
BMH	67.1	52.5
JETTY	71.4	57.8
DOSINGA	43.9	39.1
BHITARKANIKA	41.3	36.9

## NOISE LEVEL MONITORING REPORT (January- 2024)

LOCATION	DAY TIME (L <sub>eq</sub> ) in dB (A)	NIGHT TIME (L <sub>eq</sub> ) in dB (A)
COLONY	48.6	37.5
KANAKA PRASAD	45.2	36.8
BMH	60.5	51.3
JETTY	67.8	57.5
DOSINGA	42.5	36.3
BHITARKANIKA	43.4	37.1

For Mitra S.K. Private Limited



Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
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(CIN: U51909WB1956PTC023037)  
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## NOISE LEVEL MONITORING REPORT (October- 2023)

LOCATION	DAY TIME (L <sub>eq</sub> ) in dB (A)	NIGHT TIME (L <sub>eq</sub> ) in dB (A)
COLONY	51.8	41.6
KANAKA PRASAD	49.1	38.7
BMH	65.4	52.9
JETTY	70.8	62.3
DOSINGA	42.6	36.8
BHITARKANIKA	44.2	37.9

## NOISE LEVEL MONITORING REPORT (November- 2023)

LOCATION	DAY TIME (L <sub>eq</sub> ) in dB (A)	NIGHT TIME (L <sub>eq</sub> ) in dB (A)
COLONY	50.2	39.2
KANAKA PRASAD	47.6	37.9
BMH	62.8	50.1
JETTY	68.4	59.4
DOSINGA	40.1	36.2
BHITARKANIKA	42.8	36.8

For Mitra S.K. Private Limited



Authorized Signatory

# **Annexure-ID**

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1956PTC023037]  
T : (0674) 2360917, 9777450189  
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/407  
Date : 05.04.2024  
Sample No. : MSKGL/ED/2023-24/03/00900  
Sample Description : VOC Monitoring

### ANALYSIS

Sl. No	Date of Monitoring	Sampling Location	Method of Analysis	Parameter	Result
1.	02.03.2024	Jetty	NIOSH-1501	Volatile Organic Compound (VOC in mg/m <sup>3</sup> )	<0.008
2.	02.03.2024	Wagon Tippler			<0.008
3.	04.03.2024	Near Silo			<0.008
4.	04.03.2024	Transfer Point			<0.008
5.	05.03.2024	BMH Workshop			<0.008
6.	05.03.2024	Steel Yard			<0.008
7.	06.03.2024	FCC Shed			<0.008
8.	06.03.2024	SS 6 Office			<0.008

Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited

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



T : (0674) 2360917, 9777450189  
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/407  
Date : 06.03.2024  
Sample No. : MSKGL/ED/2023-24/02/00900  
Sample Description : VOC Monitoring

## ANALYSIS

<u>Sl. No</u>	<u>Date of Monitoring</u>	<u>Sampling Location</u>	<u>Method of Analysis</u>	<u>Parameter</u>	<u>Result</u>
1.	01.02.2024	Jetty	NIOSH-1501	Volatile Organic Compound (VOC in mg/m <sup>3</sup> )	<0.008
2.	01.02.2024	Wagon Tippler			<0.008
3.	03.02.2024	Near Silo			<0.008
4.	03.02.2024	Transfer Point			<0.008
5.	04.02.2024	BMII Workshop			<0.008
6.	04.02.2024	Steel Yard			<0.008
7.	05.02.2024	FCC Shed			<0.008
8.	05.02.2024	SS 6 Office			<0.008

Report Prepared by:



For Mitra S. K. Private Limited

A. R. Roy  
Authorized Signatory

# Mitra S. K. Private Limited

Plot No-087/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1956PTC023037]



T : (0674) 2360917, 9777450189  
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## TEST REPORT

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

Report No. : BBS/407  
Date : 05.02.2024  
Sample No. : MSKGL/ED/2023-24/01/00900  
Sample Description : VOC Monitoring

### ANALYSIS

Sl. No	Date of Monitoring	Sampling Location	Method of Analysis	Parameter	Result
1.	20.01.2024	Jetty	NIOSH-1501	Volatile Organic Compound (VOC in mg/m <sup>3</sup> )	<0.008
2.	20.01.2024	Wagon Tippler			<0.008
3.	21.01.2024	Near Silo			<0.008
4.	21.01.2024	Transfer Point			<0.008
5.	22.01.2024	BMH Workshop			<0.008
6.	22.01.2024	Steel Yard			<0.008
7.	23.01.2024	FCC Shed			<0.008
8.	23.01.2024	SS 6 Office			<0.008

Report Prepared by:

For Mitra S. K. Private Limited

Authorized Signatory



# Mitra S. K. Private Limited

Plot No-087/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
[CIN: U51909WB1958PTC023037]



T : (0674) 2380917, 9777450189  
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/407  
Date : 06.01.2024  
Sample No. : MSKGL/ED/2023-24/12/00900  
Sample Description : VOC Monitoring

## ANALYSIS

<u>Sl. No</u>	<u>Date of Monitoring</u>	<u>Sampling Location</u>	<u>Method of Analysis</u>	<u>Parameter</u>	<u>Result</u>
1.	02.12.2023	Jetty	NIOSH-1501	Volatile Organic Compound ( VOC in mg/m <sup>3</sup> )	<0.008
2.	02.12.2023	Wagon Tippler			<0.008
3.	03.12.2023	Near Silo			<0.008
4.	03.12.2023	Transfer Point			<0.008
5.	04.12.2023	BMH Workshop			<0.008
6.	04.12.2023	Steel Yard			<0.008
7.	05.12.2023	FCC Shed			<0.008
8.	05.12.2023	SS 6 Office			<0.008

Report Prepared by:



For Mitra S. K. Private Limited

D.K. Path  
Authorized Signatory

# Mitra S. K. Private Limited

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



T : (0674) 2360917, 9777450189  
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## TEST REPORT

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

Report No. : BBS/407  
Date : 05.12.2023  
Sample No. : MSKOL/ED/2023-24/11/00600  
Sample Description : VOC Monitoring

### ANALYSIS

Sl. No	Date of Monitoring	Sampling Location	Method of Analysis	Parameter	Result
1.	21.11.2023	Jetty	NIOSH-1501	Volatile Organic Compound ( VOC in mg/m <sup>3</sup> )	<0.008
2.	21.11.2023	Wagon Tippler			<0.008
3.	22.11.2023	Near Silo			<0.008
4.	22.11.2023	Transfer Point			<0.008
5.	23.11.2023	BMH Workshop			<0.008
6.	23.11.2023	Steel Yard			<0.008
7.	25.11.2023	FCC Shed			<0.008
8.	25.11.2023	SS 6 Office			<0.008

*G. Karan*  
Report Prepared by:



For Mitra S. K. Private Limited

*A.K. Lalig*  
Authorized Signatory

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
(CIN: U51909WB1956PTC023037)



T : (0674) 2360917, 9777450189  
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/807  
Date : 04.11.2023  
Sample No. : MSKGL/ED/2023-24/10/00560  
Sample Description : VOC Monitoring

### ANALYSIS

<u>SL. No</u>	<u>Date of Monitoring</u>	<u>Sampling Location</u>	<u>Method of Analysis</u>	<u>Parameter</u>	<u>Result</u>
1.	04.10.2023	Jetty	NIOSH-1501	Volatile Organic Compound (VOC in mg/m <sup>3</sup> )	<0.008
2.	04.10.2023	Wagon Tippler			<0.008
3.	05.10.2023	Near Silo			<0.008
4.	05.10.2023	Transfer Point			<0.008
5.	07.10.2023	BMH Workshop			<0.008
6.	07.10.2023	Steel Yard			<0.008
7.	08.10.2023	FCC Shed			<0.008
8.	08.10.2023	SS 6 Office			<0.008

*S. K. Raut*  
Report Prepared by:

For Mitra S. K. Private Limited

*A.K. Raut*  
Authorized Signatory



# **Annexure-I(E)**

# Mitra S. K. Private Limited

Plot No-687/2428, Ekamra Villa Square,  
Jaydev Vihar, 1<sup>st</sup> Floor, IRC Village,  
Bhubaneswar, Khordha, Odisha-751015  
(CIN: U51909WB1958PTC023037)  
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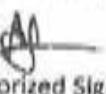
## STP WATER QUALITY MONITORING REPORT

(March 2024 )

Parameters	Units	15 KLD (Inlet)	15 KLD (Outlet)	25 KLD (Inlet)	25 KLD (Outlet)
pH	---	7.68	7.76	7.47	7.14
Total Suspended Solids	mg/l	110.0	12.2	48.0	16.0
BOD for 3 days at 27°C	mg/l	23.0	5.8	24.0	3.2
COD	mg/l	82.0	21.0	69.0	11.0
Oil & Grease	mg/l	<5.0	<5.0	<5.0	<5.0
Ammoniacal Nitrogen	mg/l	33.0	<0.1	14.0	<0.1
Total Nitrogen	mg/l	37.5	2.9	22.0	1.7
Faecal Coliform	MPN/100	2250.0	280.0	1500.0	270.0
Parameters	Units	140 KLD (Inlet)	140 KLD (Outlet)	150 KLD (Inlet)	150 KLD (Outlet)
pH	---	7.48	7.51	7.35	7.76
Total Suspended Solids	mg/l	92.0	13.0	41.4	12.8
BOD for 3 days at 27°C	mg/l	33.0	3.5	66.0	24.0
COD	mg/l	100.0	13.0	250.0	73.0
Oil & Grease	mg/l	<5.0	<5.0	<5.0	<5.0
Ammoniacal Nitrogen	mg/l	27.0	<0.1	42.0	<0.1
Total Nitrogen	mg/l	31.0	1.4	52.0	2.1
Faecal Coliform	MPN/100	1600.0	320.0	2500.0	250.0

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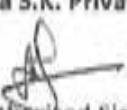
## STP WATER QUALITY MONITORING REPORT

(February 2024)

Parameters	Units	15 KLD (Inlet)	15 KLD (Outlet)	25 KLD (Inlet)	25 KLD (Outlet)
pH	---	7.98	7.68	7.99	7.60
Total Suspended Solids	mg/l	54.0	11.0	63.0	6.0
BOD for 3 days at 27°C	mg/l	34.0	7.2	26.0	2.4
COD	mg/l	130.0	34.0	120.0	13.0
Oil & Grease	mg/l	<5.0	<5.0	<5.0	<5.0
Ammoniacal Nitrogen	mg/l	32.0	<0.1	18.6	1.9
Total Nitrogen	mg/l	18.0	1.4	8.4	0.72
Faecal Coliform	MPN/100	1570.0	210.0	1250.0	190.0
Parameters	Units	140 KLD (Inlet)	140 KLD (Outlet)	150 KLD (Inlet)	150 KLD (Outlet)
pH	---	7.71	7.51	7.24	7.75
Total Suspended Solids	mg/l	64.0	12.0	89.0	28.0
BOD for 3 days at 27°C	mg/l	48.0	4.1	78.0	21.0
COD	mg/l	160.0	23.0	210.0	70.0
Oil & Grease	mg/l	<5.0	<5.0	<5.0	<5.0
Ammoniacal Nitrogen	mg/l	8.9	<0.1	29.4	4.5
Total Nitrogen	mg/l	3.1	0.42	7.8	0.88
Faecal Coliform	MPN/100	2200.0	110.0	2900.0	94.0

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## STP WATER QUALITY MONITORING REPORT

(January 2024 )

Parameters	Units	15 KLD (Inlet)	15 KLD (Outlet)	25 KLD (Inlet)	25 KLD (Outlet)
pH	---	6.80	7.89	7.83	7.91
Total Suspended Solids	mg/l	74.0	<2.5	61.0	5.6
BOD for 3 days at 27°C	mg/l	39.0	6.4	40.0	6.8
COD	mg/l	140.0	22.0	150.0	20.0
Oil & Grease	mg/l	<5.0	<5.0	<5.0	<5.0
Ammoniacal Nitrogen	mg/l	4.8	<0.1	8.6	2.1
Total Nitrogen	mg/l	2.1	1.7	3.2	0.98
Faecal Coliform	MPN/100	1600.0	180.0	1580.0	148.0
Parameters	Units	140 KLD (Inlet)	140 KLD (Outlet)	150 KLD (Inlet)	150 KLD (Outlet)
pH	---	7.79	7.55	7.48	7.84
Total Suspended Solids	mg/l	63.0	<2.5	121.0	12.0
BOD for 3 days at 27°C	mg/l	51.0	7.2	66.0	8.0
COD	mg/l	170.0	19.0	230.0	18.0
Oil & Grease	mg/l	<5.0	<5.0	8.6	<5.0
Ammoniacal Nitrogen	mg/l	7.6	1.6	18.7	3.8
Total Nitrogen	mg/l	2.2	0.84	6.4	0.74
Faecal Coliform	MPN/100	2400.0	98.0	3100.0	87.0

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## STP WATER QUALITY MONITORING REPORT

(December 2023 )

Parameters	Units	15 KLD (Inlet)	15 KLD (Outlet)	25 KLD (Inlet)	25 KLD (Outlet)
pH	----	7.18	7.80	7.76	7.80
Total Suspended Solids	mg/l	28.6	6.0	28.0	<2.5
BOD for 3 days at 27°C	mg/l	48.4	2.6	16.0	2.7
COD	mg/l	112.6	9.0	80.0	12.0
Oil & Grease	mg/l	<5.0	<5.0	<5.0	<5.0
Ammoniacal Nitrogen	mg/l	20.0	<0.1	16.0	<0.1
Total Nitrogen	mg/l	29.6	3.6	24.0	1.9
Faecal Coliform	MPN/100	2000.0	240.0	1490.0	260.0
Parameters	Units	140 KLD (Inlet)	140 KLD (Outlet)	150 KLD (Inlet)	150 KLD (Outlet)
pH	----	7.03	7.65	7.06	7.57
Total Suspended Solids	mg/l	29.2	<2.5	26.8	<2.5
BOD for 3 days at 27°C	mg/l	18.6	3.1	15.9	2.2
COD	mg/l	86.2	11.0	56.8	10.0
Oil & Grease	mg/l	<5.0	<5.0	<5.0	<5.0
Ammoniacal Nitrogen	mg/l	14.0	<0.1	17.3	<0.1
Total Nitrogen	mg/l	22.0	1.8	34.2	2.6
Faecal Coliform	MPN/100	1570.0	290.0	2100.0	210.0

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## STP WATER QUALITY MONITORING REPORT

(November-2023)

Parameters	Units	15 KLD (Inlet)	15 KLD (Outlet)	25 KLD (Inlet)	25 KLD (Outlet)
pH	---	6.53	7.41	6.19	7.70
Total Suspended Solids	mg/l	120.0	4.5	125.0	3.0
BOD for 3 days at 27°C	mg/l	71.0	5.2	52.0	4.0
COD	mg/l	222.0	17.0	152.0	12.0
Oil & Grease	mg/l	8.6	<5.0	13.0	<5.0
Ammoniacal Nitrogen	mg/l	6.1	<0.1	7.4	2.4
Total Nitrogen	mg/l	3.4	1.9	3.1	1.9
Faecal Coliform	MPN/100	1400.0	130.0	1350.0	120.0
Parameters	Units	140 KLD (Inlet)	140 KLD (Outlet)	150 KLD (Inlet)	150 KLD (Outlet)
pH	---	6.38	7.18	6.72	7.26
Total Suspended Solids	mg/l	70.0	7.0	73.0	10.0
BOD for 3 days at 27°C	mg/l	35.0	6.0	28.0	4.5
COD	mg/l	182.0	22.0	150.0	16.0
Oil & Grease	mg/l	<5.0	<5.0	<5.0	<5.0
Ammoniacal Nitrogen	mg/l	4.5	2.9	12.4	2.8
Total Nitrogen	mg/l	2.7	0.98	5.8	1.4
Faecal Coliform	MPN/100	1700.0	94.0	2970.0	79.0

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## STP WATER QUALITY MONITORING REPORT

(October 2023)

Parameters	Units	15 KLD (Inlet)	15 KLD (Outlet)	25 KLD (Inlet)	25 KLD (Outlet)
pH	---	7.55	8.21	7.79	7.95
Total Suspended Solids	mg/l	9.0	3.0	10.0	4.0
BOD for 3 days at 27°C	mg/l	4.8	<2.0	4.2	<2.0
COD	mg/l	20.0	<4.0	20.0	10.0
Oil & Grease	mg/l	<5.0	<5.0	<5.0	<5.0
Ammoniacal Nitrogen	mg/l	5.4	<0.1	5.8	0.76
Total Nitrogen	mg/l	2.1	1.2	2.1	1.2
Faecal Coliform	MPN/100	1380.0	110.0	1270.0	98.0
Parameters	Units	140 KLD (Inlet)	140 KLD (Outlet)	150 KLD (Inlet)	150 KLD (Outlet)
pH	---	7.37	7.51	7.70	7.72
Total Suspended Solids	mg/l	10.0	9.0	20.0	<2.5
BOD for 3 days at 27°C	mg/l	7.2	<2.0	8.2	2.6
COD	mg/l	30.0	10.0	30.0	12.0
Oil & Grease	mg/l	<5.0	<5.0	<5.0	<5.0
Ammoniacal Nitrogen	mg/l	3.1	1.8	0.87	0.54
Total Nitrogen	mg/l	2.9	0.74	1.9	0.98
Faecal Coliform	MPN/100	1850.0	79.0	1740.0	55.0

For Mitra S.K. Private Limited



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# **Annexure II**

**THE DHAMRA PORT COMPANY LIMITED**

**Environment Management Plan**

Sl. No.	Activity	Relevant Environmental components likely to be impacted	Likely impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
1	Capital dredging/ Reclamation/ Disposal/ Construction of Approach Trestle/ Berths and other offshore structures such as seawater intake/ marine outfall	Marine water Quality	<ul style="list-style-type: none"> <li>- Increase in turbidity</li> <li>- Change in marine water quality due to aqueous discharges (oily waste, sanitary wastes) from dredgers, barges and workboats.</li> <li>- Spill of Bentonite Clay during pile driving.</li> </ul>	<ul style="list-style-type: none"> <li>- Check turbidity levels with baseline levels as reference during entire monitoring programme.</li> <li>- Dredge Management Programme.</li> <li>- Discharge of waste into sea will be prohibited.</li> <li>- Oil Spill control measures will be adopted.</li> </ul>	<p>Dredging is being carried out in the areas identified and approved as part of Revised Master plan.</p> <p>As a part of existing operation, Periodic marine water quality monitoring including turbidity is carried out near Kanika island by engaging MOEFCC approved laboratory. The details of Marine Water quality monitoring reports for the period Oct'23 to Mar'24 are enclosed as Annexure I.B.</p>
		Marine ecology	<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> <ul style="list-style-type: none"> <li>- Decrease in DO levels.</li> <li>- Increase in noise levels.</li> <li>- Disturbance to benthic communities.</li> <li>- Changes in species diversity and density in areas adjoining dredging site.</li> <li>- Smothering or blanketing of sub-tidal communities.</li> </ul>	<ul style="list-style-type: none"> <li>- Adoption Standard Reclamation methods with containment system to retain the solid inside the reclamation area.</li> <li>- Disposal of unused Dredged material at the identified offshore disposal area only.</li> <li>- Marine environmental monitoring as per environmental monitoring programme.</li> </ul>	<p>Noted &amp; will be complied.</p> <p>As a part of existing operation periodic monitoring program covering all seasons on various aspects of the marine ecology</p>
		Mangrove area	<ul style="list-style-type: none"> <li>- Impact on 9ha mangrove near the southern boundary.</li> <li>- Impact on mangroves near northern boundary.</li> </ul>	<ul style="list-style-type: none"> <li>- 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</li> </ul>	

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"> <li>- Impact on mangroves at Kanika Island.</li> </ul>	<p>planning stage, a channel for seawater influx is considered to the mangrove area.</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Minimum 50 m buffer has been provided near the Northern mangrove area and all the construction will be limited as per plan.</li> <li>- Discharge of toxic/hazardous materials during the port construction would not be allowed.</li> <li>- Revised Master Plan ensures the Tidal exchange near the mangrove area which is also ensured by of hydrodynamic modelling studies.</li> <li>- Dredge spoil should not be entered into mangrove area.</li> <li>- Awareness will be imparted to workers in the port about the importance of mangroves and their conservation.</li> </ul>	<p>monitoring is being carried out by NABL &amp; MoEFCC accredited laboratory.</p>	<p>Noted</p>
		<ul style="list-style-type: none"> <li>- Impact on turtle/Other</li> </ul>	<ul style="list-style-type: none"> <li>- Accidental take during dredging.</li> </ul>		

Sl. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
	Macro Fauna	<ul style="list-style-type: none"> <li>- Light Glare on Nesting</li> </ul>	<ul style="list-style-type: none"> <li>there is no regular movement of turtle into the channel area.</li> <li>- DPCL to take appropriate measures to avoid accidental take of turtle during dredging.</li> <li>- Install specialised illumination system in line with "International Dark Sky Association (IDA)" to avoid glare to the sky or focusing light towards sea.</li> <li>- Mercury vapour and metal halides will not be used. Sodium vapour lamps will be used</li> </ul>	<ul style="list-style-type: none"> <li>Proper access to the sea for the local fishermen is considered during planning stage itself.</li> <li>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</li> <li>Necessary marker buoys will be installed</li> <li>Regular interactions will be initiated with the fishing community before commencement of construction works</li> <li>Construction shall be limited to as per the development plan.</li> </ul>	Noted
	Fishermen and fishing villages	<ul style="list-style-type: none"> <li>- Local Fishermen approach to sea.</li> <li>- Impact on fishing due to Construction works.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>To reduce impacts from exhausts, emission control norms will be enforced /adhered.</li> <li>All the vehicles and construction machinery will be periodically checked</li> </ul>	Complied. As a part of existing operation, air pollution mitigation measures are being adopted.
2	Materials transport and construction activities.	Air Quality	<ul style="list-style-type: none"> <li>- Exhaust emissions from vehicles.</li> <li>- Windblown dust during material movement.</li> </ul>		

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"> <li>- Fugitive dust during material unloading.</li> <li>- Dust suspension during site preparation, construction.</li> <li>- Emissions from DG Sets.</li> </ul>	<ul style="list-style-type: none"> <li>- to ensure compliance to the emission standards.</li> <li>- Construction equipment and transport vehicles will be periodically washed to remove accumulated dirt.</li> <li>- Providing adequately sized construction yard for storage of construction materials, equipment tools, earthmoving equipment, etc.</li> <li>- Provide enclosures on all sides of construction site.</li> <li>- Movement of material will be mostly during nonpeak hours.</li> <li>- On-site vehicle speeds will be controlled to reduce excessive dust suspension in air and dispersion by traffic.</li> <li>- Water sprinkling will be carried out to suppress fugitive dust.</li> <li>- Environmental awareness program will be provided to the personnel involved in developmental works.</li> <li>- Use of tarpaulin covers and speed regulations for vehicles engaged in transportation.</li> </ul>	<p>Noted.</p> <p>As a part of existing operation Noise monitoring is carried out on monthly basis by engaging accredited NABL &amp; MOEFCC laboratory. The Monitoring results are also submitted to the Regional office on regular basis. The copy is enclosed as Annexure – I C.</p>
		Noise	<ul style="list-style-type: none"> <li>- Noise from following activities</li> </ul>	<ul style="list-style-type: none"> <li>- Vehicles transporting construction material.</li> <li>- Diesel run engines of construction machinery and dredgers.</li> <li>- Pile driving activities during construction of Approach trestle/cargo berths etc.,</li> </ul> <ul style="list-style-type: none"> <li>- Noise levels will be maintained below threshold levels stipulated by Central Pollution Control Board /Odisha State Pollution Control Board (CPCB)/OSPCB.</li> <li>- Procurement of machinery / construction equipment will be done in accordance with specifications conforming to source noise levels less than 75 dB (A).</li> </ul>	

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"> <li>- Well-maintained construction equipment, which meets the regulatory standards for source noise levels, will be used.</li> <li>- Any equipment emitting high noise, wherever possible, will be oriented so that the noise is directed away from sensitive receptors.</li> <li>- Noise attenuation will be practised for noisy equipment by employing suitable techniques such as acoustic controls, insulation and vibration dampers.</li> <li>- High noise generating activities such as piling and drilling will be scheduled at daytime (6.00am to 10 pm) to minimise noise impacts.</li> <li>- Personnel exposed to noise levels beyond threshold limits will be provided with personal protective equipment's such as earplugs, ear muffs, etc.</li> <li>- Ambient noise levels will be monitored at regular intervals.</li> <li>- Exercise route selection, traffic regulations, timings etc.,</li> </ul>	<p><b>Noted.</b> 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.</p> <p><b>Prudent Planning of Layout–Mathematical Modelling Studies</b></p>
				<ul style="list-style-type: none"> <li>- Impact to natural flow of runoff due to reclamation and change of drainage course.</li> </ul>	

S. 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"> <li>- Shows Flow regime changes for various tidal conditions in the study domain after the proposed expansion development of the Port are predicted to be not of much significance and is limited to the development location mostly and found to be very much local in nature. No change in the flow regime of the rest of the domain is observed.</li> </ul>	<ul style="list-style-type: none"> <li>- 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.</li> <li>- Construction activities shall be limited within the site and dust shall be contained within the construction area.</li> </ul>	<p>Noted.</p> <p>DPCl has an exclusive rail connectivity for the project and has proposal for future expansion of rail-road connectivity.</p> <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 RMIP EIA studies, Traffic study was conducted for assessment &amp; evaluation of feasibility of Four Lane road (which is already approved as a part of</p>
		Vegetation and Strain on existing infrastructure	<ul style="list-style-type: none"> <li>- Loss of vegetation and strain on existing infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>- 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.</li> <li>- Construction activities shall be limited within the site and dust shall be contained within the construction area.</li> </ul>	<p>Noted.</p> <p>DPCl has an exclusive rail connectivity for the project and has proposal for future expansion of rail-road connectivity.</p> <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 RMIP EIA studies, Traffic study was conducted for assessment &amp; evaluation of feasibility of Four Lane road (which is already approved as a part of</p>
		Existing Traffic	<ul style="list-style-type: none"> <li>- Traffic addition</li> </ul>	<ul style="list-style-type: none"> <li>- The existing approach road to Dhamra Port is being widened by GoO which will improve the traffic conditions.</li> <li>- 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.</li> <li>- In addition, approval has already been obtained by DPCl for 4 lane road and 2 rail tracks (as a part of Phase I &amp; 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.</li> </ul>	<p>Noted.</p> <p>DPCl has an exclusive rail connectivity for the project and has proposal for future expansion of rail-road connectivity.</p> <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 RMIP EIA studies, Traffic study was conducted for assessment &amp; evaluation of feasibility of Four Lane road (which is already approved as a part 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
			<ul style="list-style-type: none"> <li>- Drivers should be sensitized with respect to need to drive carefully while passing village areas.</li> <li>- Speed of the trucks shall be controlled by providing speed breakers, sign boards and other appropriate speed control techniques.</li> <li>- Proper lighting, signboards shall be provided at required locations.</li> </ul>	<p>Phase –II clearance] with future provision of Two lane, to be developed as a part of Revised Master Plan to connect Bhadrak &amp; Dhamra Port. Based on this –</p> <ol style="list-style-type: none"> <li>1. Both Normal traffic + Generated traffic (due to proposed expansion)</li> <li>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 IIRC guidelines.</li> </ol> <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>	

Sl. No.	Activity	Relevant Environmental components Likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
3	Land Reclamation	Existing Water Resources like Groundwater and surface water	<p>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.</p> <p>Construction phase water requirement will be met through existing sources i.e. Matai River.</p>	<p>- Existing protective bunds (salt dyke) prevent inundation of salt water to the adjoining land.</p> <p>- Return seawater from reclamation areas will be channeled back to sea.</p>	Noted
4	Solid Waste Management	Soil quality	Impacts due to disposal of solid waste on ground	<p>- Proper waste Management practice is being followed and shall be extended.</p> <p>- General refuse generated on-site will be collected in waste skips and separated from construction waste.</p>	<p>Noted</p> <p>DPCl has developed a vision for making itself – "A Zero Waste to Landfill Port" by adoption of 5R principle of waste management i.e</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
5	Handling of hazardous wastes	Human safety and property/ Environment Loss	<ul style="list-style-type: none"> <li>- Fire accidents due to hazardous handling.</li> <li>- Impact on Terrestrial and Marine Environment.</li> </ul>	<ul style="list-style-type: none"> <li>- Hazardous material</li> <li>- Management Rules, 2016 (as amended) will be followed for environmental sound management of hazardous waste.</li> </ul>	<p>Noted</p> <ul style="list-style-type: none"> <li>- Adequate safety measures as per OSHA standards will be adopted.</li> <li>- Construction site will be secured by fencing with controlled/limited entry points.</li> <li>- Hazardous materials such as lubricants, paints, compressed gases, and varnishes etc., will be stored as per the prescribed/approved safety norms.</li> <li>- Construction site will be secured by fencing with controlled/ limited entry points.</li> <li>- Medical Facilities including first aid will be made available for attending to injured workers.</li> </ul>

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"> <li>- Handling and storage as per statutory guidelines.</li> <li>- Positive isolation procedures will be adhered.</li> <li>- Hazardous wastes will be disposed through approved OSPOB/CPCB vendors.</li> </ul>		
6	Water Resources	Existing Water Resources like Groundwater and surface water	<ul style="list-style-type: none"> <li>- Impacts to the surface water body</li> </ul>	<ul style="list-style-type: none"> <li>- Water required during construction activity will be met through existing water supply system from Mati River.</li> <li>- Groundwater table at Dhamira is high due to high rainfall. However, optimization of water resource will be done.</li> </ul>		<p>Noted</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- Care will be taken to prevent the runoff from the construction site to the nearby natural streams connecting to rivers.</li> <li>- Construction camp wastewater will be collected and treated. Treated wastewater will be used for Plantation/Greenbelt development.</li> </ul>
Operational Phase						
1	Cargo handling and Inland Cargo	Air Quality	<ul style="list-style-type: none"> <li>- Emissions from unloading equipment, DG sets, vehicular emissions,</li> </ul>	<ul style="list-style-type: none"> <li>- Most of the cargo transportation through rail and Pipelines (~70%).</li> <li>- Use of specialized ship loaders/unloaders,</li> </ul>		<p>Noted</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
	movement and storage areas, Regasification process and equipment operation such as pumps, compressors, etc.,		<p>Emissions from storage areas, Emissions from vessels visiting Dhamra Port, Vehicular emissions due to cargo transport, emissions from LNG/LPG regassification process, spillage of cargo etc., Air Quality Modelling study is carried out to Predict the GLCs at the receptors due to Fugitive emissions from Dry bulk cargo stockyard and Vehicular movements, etc., and it is found that resultant concentrations are well within the NAAQs standards at all receptors.</p>	<ul style="list-style-type: none"> <li>- wagon tippler, track Hopper, covered conveyors and rapid loading system through silos.</li> <li>- Use of -low Sulphur diesel fuel is proposed.</li> <li>- Dust Suppression measures at loading/unloading points, wagon tippler complex, Track Hoppers, transfer points, stock yards, rapid loading system and at internal roads.</li> <li>- Scientific and regulated stacking of cargo piles</li> <li>- Wind screens will be provided along stack yard.</li> <li>- Periodic cleaning of cargo spills.</li> <li>- Use of tarpaulin covers and speed regulations for vehicles/wagons engaged in transportation.</li> <li>- Greenbelt Development.</li> <li>- Proper housekeeping.</li> <li>- Regularization of truck movement.</li> <li>- Vessels visiting the facility shall meet emission standards as per MARPOL.</li> <li>- Use of Eco-friendly regassification technology such as Seawater based/Ambient Air Based for LNG Regassification.</li> </ul>	<p>Noted.</p> <p>As a part of existing operation Noise monitoring is carried out on monthly basis by engaging accredited NABL &amp; MOEFCC laboratory. The Monitoring results are also submitted to the Regional</p>
	Noise		<ul style="list-style-type: none"> <li>- Due to equipment handling and vehicular movement.</li> <li>- Ship unloading operations.</li> <li>- Due to Regassification Process and equipment operation.</li> </ul>	<ul style="list-style-type: none"> <li>- Acoustic Barriers and Enclosures.</li> <li>- Personal Protective Equipment (PPE).</li> <li>- Greenbelt Development.</li> <li>- Counselling and traffic regulation.</li> </ul>	

Sl. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
	Traffic Addition	Cargo movement from/to port	<ul style="list-style-type: none"> <li>- Most of the cargo transportation through rail and Pipelines (~ 70%).</li> <li>- Proposed National Water Way (NW-5) will also be used for the transport of cargos which will reduce likely congestion on road.</li> <li>- Approval has already been obtained by DPCL for 4 lane road and 2 rail tracks [as a part of Phase I &amp; 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.</li> <li>- 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.</li> <li>- rail, road and utilities corridor (approx.12km x 125m wide) is also proposed from Northern side development of Dhamra Port.</li> <li>- 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.</li> </ul>	<ul style="list-style-type: none"> <li>- DPCL has an exclusive rail connectivity for the project and has proposal for future expansion of rail-road connectivity.</li> <li>Besides, DPCL has participated with PWD for maintenance and improvement of the main service road to Dhamra and has shared the cost of development.</li> <li>As a part of RMP EIA studies, Traffic study was conducted for assessment &amp; 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 &amp; Dhamra Port. Based on this –</li> <li>3. Both Normal traffic + Generated traffic (due to proposed expansion) considered for the study.</li> <li>4. Four lane (which is already approved as a part of Phase -II clearance) with future provision of 2 lane road, to be developed as a part of Revised Master Plan is proposed, which shall be sufficient to</li> </ul>	

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>meet the Port Requirement as per the IIRC 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 conditionsProposed road link will induce local traffic movement on either side and boost the travel characteristics of the people residing in nearby villages addition, for easy evacuation of cargo, a new Rail/Road/Utility Corridor (12 km x 125 m wide) is also proposed from Northern side of Dhamra Port.</p>	<p>Noted</p>
			<p>- Local Fishermen approach to sea.</p> <p>- Fishing harbour is located in Dhamra River at 6.5 km southwest boundary of the port. The fishing boats travels all through the Dhamra River and enter into sea. The approach channel of the port is oriented from south to north east whereas fishing boats travels from south to east. Fishing is being carried out at deep sea. Therefore, significant impact on fishing is not envisaged.</p>	<ul style="list-style-type: none"> <li>- Dhamra Port is an existing port, fishermen in the area are well aware of the existing port activities. Therefore, no direct impact is envisaged.</li> <li>- Creation of awareness among the fishermen about proposed master plan activities is being done and will be continued.</li> <li>- Marker buoys along the channel.</li> <li>- Educate the fishermen about the orientation of approach channel and ships visits etc.,</li> <li>- Regular interactions will be initiated with the fishing community.</li> </ul>	

Sl. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
2	Aqueous discharges in harbour basin	Marine water quality and ecology	<ul style="list-style-type: none"> <li>- 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.</li> </ul>	<ul style="list-style-type: none"> <li>- Vessels/Ships will be required to exchange ballast water in a deep sea location prior to arrival in the harbour.</li> <li>- Ships are prohibited from discharging Waste water, bilge, oil wastes, etc into the near shore as well as harbour waters.</li> <li>- Ships would also comply with the MARPOL regulation.</li> <li>- As a mitigation measure for spillages an Oil spill contingency plan prepared and will be implemented.</li> <li>- Provision of waste reception facility for bilge water and waste oil will be explored</li> <li>- 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.</li> <li>- LNG/LPG regassification return water with low temperature (&lt;70C than ambient) will be sent back through marine outfall system with diffusers at identified location through mathematical model studies which will</li> </ul>	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
3	Cargo and Oil Spills (Accidental)	Marine water quality and ecology	- Change in marine water quality	ensures attainment of ambient conditions (within 600 m) in the harbour area.	

Sl. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
5	Water Supply	Water resources	Impact on existing water resources	measures such as silt screen to contain the turbidity.	
6	Wastewater Discharge	Water Quality	<ul style="list-style-type: none"> <li>- Impact due to discharge of runoff from stock piles and disposal of untreated sewage.</li> <li>- Impact due to discharge of brine [reject] from Desalination plant] runoff from stock piles.</li> <li>- And disposal of untreated sewage.</li> </ul>	<ul style="list-style-type: none"> <li>- (Perennial) at the existing intake location. The maximum water withdrawal shall be 100 MLD[for 40 MLD desalination plant].</li> <li>- No downstream users are observed beyond the Intake Point at River Matai.</li> <li>- 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.</li> </ul>	<p>Noted</p> <ul style="list-style-type: none"> <li>- Collection of runoff from stock piles and directing into settling ponds for recycling and supernatant water will be used for dust suppression.</li> <li>- Neutralisation using lime to ensure settlement of heavy metals, if any.</li> <li>- STP (1 MLD capacity during 5 year and 2 MLD [Cumulative] capacity during 30 year development) to treat the sewage generated in the premises.</li> <li>- ETP (3 MLD capacity during 5 year and 5 MLD [Cumulative] capacity during 30 year development) to treat the effluents.</li> <li>- Storm Water Drainage System</li> </ul>

Sl. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
7	Seawater withdrawal for Regasification and water withdrawal from River matai for desalination plant	Marine ecology/ River Ecology	- Impingement/Entrainment/ Entrapment of aquatic life	<ul style="list-style-type: none"> <li>- Intake with proper screens will be Provided</li> <li>- Maintaining Low Intake Velocity to minimise the Entrainment &amp; impingement.</li> <li>- Seawater Intake is proposed in protected harbour basin which will reduce major marine organism entry.</li> <li>- Intake is proposed nearer to LNG Terminal and hence entrainment will be insignificant.</li> </ul>	Noted
8	Solid Waste Management	Groundwater and Soil quality	- Impact due to disposal of solid waste on ground	<ul style="list-style-type: none"> <li>- 5 R (Reduce /Reuse/Recycle/Recycle and Re Process) principle shall be explored</li> <li>- STP sludge will be used as manure in green belt.</li> <li>- Organic Waste Converter will be provided.</li> <li>- Composted bio-degradable waste will be used as manure in greenbelts/ gardens.</li> <li>- Other recyclable wastes will be sold to OSPCB authorised vendors.</li> <li>- Commercial use will be explored for the materials settled in dump pond.</li> </ul>	<p>Noted</p> <p>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 &amp; Recover.</p> <p>During the period Oct'23 to Mar'24, a total quantity of 207.61 MT of solid waste has been handled in line to 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>

Sl. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts and their significance in the absence of Mitigation Measures	Mitigation Measures	Compliance
	Handling of hazardous materials/ wastes	Fire accidents due to products handling and other health hazards/ Groundwater and soil contamination	- Human life and loss of property. - Impact on Terrestrial and Marine Environment	<ul style="list-style-type: none"> <li>- Hazardous and other waste Management Rules, 2016 (as amended) will be followed for environmental sound management of hazardous waste.</li> <li>- Adequate safety measures as per OSHA standards will be adopted.</li> <li>- Hazardous materials such as lubricants, paints, compressed gases, and varnishes etc., will be stored as per the prescribed/approved safety norms.</li> <li>- Medical facilities including first aid will be made available for attending to injured workers.</li> <li>- Handling and storage as per statutory guidelines.</li> <li>- Positive isolation procedures will be adhered.</li> <li>- Hazardous wastes will be disposed through approved OSPCB/CPCB vendors or shall be given to nearby approved cement industry for coprocessing.</li> <li>- Risk analysis has been carried out and suggested risk mitigation measures shall be adopted.</li> <li>- Emergency alarms, provision of fire hydrant system and fire station.</li> <li>- Effective Disaster Management Plan (DMP)</li> </ul>	<p>We have a strict safety regimen with the motto "Safety First". Safety Observations are mandatory from every department of the port and immediate measures are undertaken to rectify the shortcoming.</p> <p>OHSAS Guidelines and MSIHC Guidelines are followed for handling of Hazardous materials. First aid center facilities have been provided for employees and workers. Inline to this a wellness center is also operated outside the port premises for providing medical facilities for villagers.</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"> <li>- which covers onsite and offsite emergency plans.</li> <li>- Recovery of spills to the maximum extent possible.</li> </ul>		
11	Presence of Reclaimed back up area or Bund	<p>Shoreline Changes in Hydrodynamics</p> <p>The shoreline modelling studies shows that mostly accretion in the stretches studies and erosion in north of revised master plan area at the rates of -4.38m/ year and erosion below the Dhamira river region at the rate of -2.71 m/ year. Suitable mitigation measures will be carried out to maintain the stability of coast.</p> <p>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.</p>	<ul style="list-style-type: none"> <li>- Monitoring of shoreline with the help of high resolution satellite imageries during operation phase shall be carried out periodically.</li> <li>- 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.</li> </ul>	<p>Noted.</p> <p>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>	<p>Noted</p> <p>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</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
		Natural Hazards	<p>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.</p> <p>and transport facilities that will be developed/ triggered as a part of overall economic development of the region.</p>	<p>Noted &amp; will be complied.</p> <p>At present no hazardous or petroleum products are being handled at shore and details RA recommendation will be compiled as and when applicable. However, as a part of present operation following measures are being adopted.</p> <p>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.</p>	
	Induced Development		<p>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.</p>	<p>Noted &amp; will be complied.</p>	

ANNEXURE-III

Dhamra Port Company Limited

Environmental Expenditure

Period: Oct-23 to Mar-24

Sl.No	Activity/Category	Expenditure (in Lakhs)
01	Construction of new drains and drain cleaning	21.76
02	Environmental Monitoring Services	15.67
03	Waste management & disposal	13.68
04	Treatment and Disposal of Bio-Medical Waste	2.10
05	Inside Port plantation and maintenance	26.00
06	O&M of Sewage Treatment Plant (STP)	22.66
07	Port housekeeping (Environment)	37.62
08	Port housekeeping (Operation)	41.05
09	Wagon Covering	110.41
10	Stock yard Covering	46.90
11	Truck Covering	2.24
12	Water Sprinkling on road of Inside &Outside Port	20.02
13	Water Conservation Initiative	10.32
14	Housekeeping (Engineering Services)	149.57
15	Mechanized Road Sweeping Machine	74.89
16	O & M of Organic Waste Converter	9.84
17	Firefighting Expenses	54.36
18	O & M of Mist Cannon for dust suppression	8.68
19	Sewage Management	16.70
20	Environment Awareness & award	0.95
	<b>Total</b>	<b>685.42</b>

## ANNEXURE-IV

THE DHAMRA PORT COMPANY LIMITED								
CSR WORK DETAILS								
Oct'23 to Mar'24								
	EDUCATION	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Total (Oct'23 - Mar'24)
1	Utkarsh	2.30	2.30	2.30	2.30	2.30	104.30	115.80
2	Adani DAV Public School, Kurnool,	26.51	30.18	41.37	38.75	42.69	40.78	329.45
3	Udaan - Young & adolescent Students get to visit the Adani Dharmra Port for a knowledge based experience about the Port and the activities of Adani Foundation	0.34	0.34	0.68	0.68	0.68	0.68	3.40
		29.18	32.79	44.35	47.73	45.87	184.76	348.85
COMMUNITY HEALTH								
1	Wellness Centre- Medicines for free distribution to community at the health centre.	0.00	0.00	0.00	0.00	20.00	0.00	20.00
2	MHCU Service - 2 Mobile Health Care Units are conducting door step helath service to the villages in and around 03 blocks of Bhadrak District i.e. Chandballi, Tihidi & Bhadrak	0.00	0.00	0.00	0.00	7.77	0.00	7.77
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	2.67	2.67	2.67	0.00	8.01
4	Special Day and Month Observation	0.00	0.00	2.04	0.00	0.12	0.00	2.16
5	Improving the Government Health facility- Basudevpur CHC	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	0.00	4.71	2.67	30.88	0.00	37.94
SUSTAINABLE LIVELIHOOD								
1	Farmers' group initiative	0.00	0.00	0.00	0.00	0.00	22.93	22.93
2	Livestock Care- MVU	0.00	0.00	0.00	0.00	0.00	5.26	5.26
3	Promoting Rural Sports	0.00	0.00	0.00	0.00	0.00	6.99	6.99
		0.00	0.00	0.00	0.00	0.00	35.18	35.18
RURAL INFRASTRUCTURE DEVELOPMENT								
1	Village Development Related (Road Infra Support)	0.00	0.00	0.00	0.00	0.00	57.00	57.00
		0.00	0.00	0.00	0.00	0.00	57.00	57.00
1	General Management and Administration	11.19	11.19	11.19	11.19	11.19	11.19	66.90
	GRAND TOTAL	29.18	32.79	40.08	44.40	78.43	246.94	548.85

## ANNEXURE-V

## Yearwise Expenditure for Corporate Environment Responsibility (CER)

SL. No.	CORE AREA	PROJECT	Budget for 2019 - 2024 (5 years)						
			2019-20 (in Lakhs)	2020-21 (in Lakhs)	2021-22 (in Lakhs)	2022-23 (in Lakhs)	2023-24 (in Lakhs)	Grant Total (in Lakhs)	
1	<b>Biodiversity</b>	Mangroves conservation plan	0.00	0.00	0.00	0.00	0.00	0.00	
		Turtle / other species Conservation plan	7.56	24.59	61.85	60.40	46.54	200.94	
		Environment Cell cum School Library	0.00	0.00	0.00	0.00	0.00	0.00	
		Community Plantation	81.40	0.00	77.31	28.25	0.00	186.96	
			<b>Total of Biodiversity</b>			88.96	24.59	139.16	
2	<b>Water Conservation and Water Recharge Projects</b>	Pond Deepening / Pond strengthening	0.00	0.00	0.00	0.00	31.54	31.54	
		Bore well Recharge Structure	0.00	0.00	0.00	0.00	0.00	0.00	
		<b>Total of Water Conservation and Water Recharge Projects</b>			0.00	0.00	0.00	31.54	
3	<b>Fisherman alternate livelihood</b>	Technical Training to Fisherman youth	0.00	0.00	0.00	0.00	0.00	0.00	
		Soft Skill Training to Fisherwoman	0.00	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	0.00	
		Electrification of Fishing Area	0.00	0.00	0.00	0.00	0.00	0.00	
			<b>Total of Fisherman alternate livelihood</b>			0.00	0.00	0.00	
4	<b>Women Empowerment Project to promote entrepreneurship</b>	Income generation programme to Women	0.00	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	0.00	
		<b>Total of Women Empowerment Project to promote entrepreneurship</b>			0.00	0.00	0.00	0.00	
5	<b>Agriculture Promotion</b>	Commercial Vegetable Cultivation	0.00	0.00	0.00	0.00	0.00	0.00	
		Fodder Cultivation/Farmer Initiatives	0.00	0.00	0.00	0.00	0.00	0.00	
		Multi Cropping	0.00	0.00	0.00	0.00	0.00	0.00	
			<b>Total of Agriculture Promotion</b>			0.00	0.00	0.00	
6	<b>Community Infrastructure</b>	Internal village Road Development	0.00	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	42.64	42.64	
		Construction of Community toilet	0.00	0.00	0.00	0.00	0.00	0.00	
		Development of School infrastructure	0.00	0.00	0.00	0.00	0.00	0.00	
		Construction of Mini Stadium	0.00	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	0.00	
			<b>Total of Community Infrastructure</b>			0.00	0.00	42.64	
		<b>GRAND TOTAL</b>		88.96	24.59	139.16	88.65	110.72	452.08

## 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)	6525		
	10 Tons flex Barge (no.)	-	4	
	Sorbent boom (meters)	-	500	
	Sorbent Pad (no.)	-	2000	
	Shoreline cleanup Equipment	Mini Vacuum 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	2		
	IMO Level 3	1		
	Other	-		

# **Annexure-VII**

## Plantation / Greenbelt Inside Port



## Plantation / Greenbelt Inside Port



## Plantation / Greenbelt Inside Port



Avenue Plantation (Inside Port)



Roadside Plantation (Inside Port)



Plantation Inside Port



Plantation inside Port

## Plantation / Greenbelt - Nursery



Nursery at Dhamra Port



Nursery at Dhamra Port



Nursery at Dhamra Port

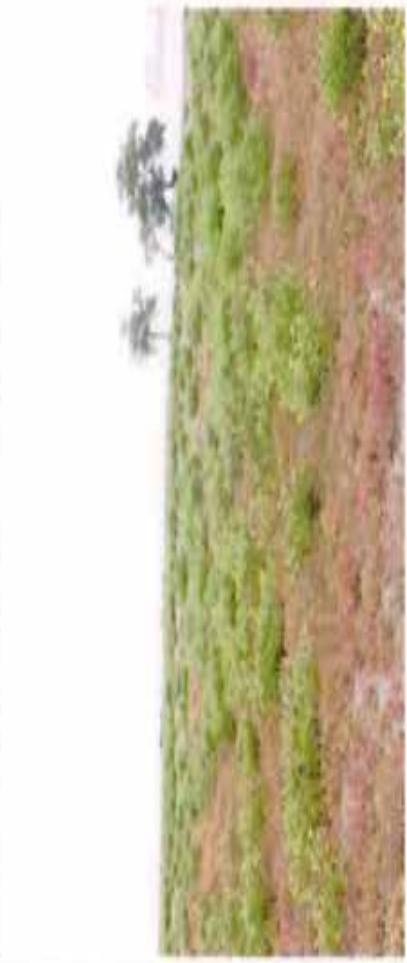


Nursery at Dhamra Port

## Plantation / Greenbelt – Degraded Forest Patch

	Plantation in degraded Forest Patch (North side)
	Plantation in degraded Forest Patch (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 5ltr-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 TRANSFERMER	DCP5KG-01 NO,CO2 4.5KG-01 NO
140	FCC LABOUR COLONY	CO2-4.5KG-01 NO, DCP5KG-02NOS.
141	SS-7	CO2 -4.5KG-9nos
142	SS-8	CO2 -4.5KG-9nos, DCP-5KG-02Nos
143	SS-9	CO2 -4.5KG-16nos, DCP-5KG-06Nos
144	TP-7(A)	CO2 -4.5KG-1no
145	TP-8(A)	CO2 -4.5KG-1no
146	TP-1(C)	CO2 -4.5KG-1no
147	TP-2(C)	CO2 -4.5KG-1no
148	TP-3(C)	CO2 -4.5KG-1no
149	North Gate	CO2 -4.5KG-3nos, DCP-5KG-01No
150	Mobile Equipment Office, BMH	CO2 -4.5KG-1no
151	DPCL Central Store	Foam 50ltr-01 No, DCP5kg-01 No.
152	Fire pump house (T. HOPPER)	CO24.5kg-01 No, DCP5kg-01 No.
153	FCC Workshop	CO24.5kg-02 Nos, DCP5kg-02 Nos.
154	Township Shopping Mall	DCP5kg-03 Nos, CO2-4.5kg-01 no.
155	CAT Dozer	DCP6KG-01 Nos
<b>Total Fire Extinguisher Installed at site</b>		<b>CO2-4.5kg=316Nos CO2-3kg =05nos DCP-6/5kg=187nos DCP-2kg=04nos DCP 25kg-02nos Foam-9ltrs=17nos Foam -50ltrs =06nos</b>

<b>Stock Balance Fire Tender and Fire Store</b>	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.
<b>Total Numbers fire Extinguisher</b>	DCP Extinguisher= 325 Nos CO2 Extinguisher= 399 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	140
2	Safety Induction Training	158	5254
3	Portable fire Extinguisher training	11	345
4	Defensive driving training	1	7
5	Toolbox training	541	4869
6	On the Job Safety Awareness	24	240

#### Fire Crews member:-

Sl No	Position	Total
01	Fire Officer	01(Post is now Vacant)
02	Fire Supervisor	02
03	Safety Co ordinator	01
04	Fire tender Operator	07
05	Leading fireman	07
06	Fire man	21
		<b>Total Fire Crews- 39</b>

#### Fire Tender Details:-

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

## FIRE EXTINGUISHER TRAINING



EMERGENCY RESCUE MOCK DRILL AT SITE



