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DPCL/ENV/MOEFCC/2018-99

#### To

The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Eastern Regional Office (EZ), A/3, Chandrasekharpur, Bhubaneswar- 751023 E-mail: roez.bsr-mef@nic.in

- : Half yearly Compliance report of Environment and CRZ Clearance for expansion of Dhamra Sub Port at Dhamra, Bhadrak District of Odisha by M/s Dhamra Port Company Limited for the period of October 2017 - March-2018
- Ref: 1) Environmental Clearance for Expansion of Dhamra Port Project vide letter dated 4th January 2000 bearing No. PD/26017/8/98-PDZ (CRZ).
  - CRZ recommendation letter for phase-II expansion vide letter dated 20<sup>th</sup> December, 2012 bearing no. OCZMA-1/2012-13/No.17
  - 3) Environmental and CRZ Clearance for expansion at Dhamra Port dated 1<sup>st</sup> January 2014 bearing F.No.11-104/2009-IA.III
  - 4) Amendment in Environmental and CRZ clearance vide letter dated 25th March 2015 bearing F.No.11-104/2009.IA.III

Dear Sir,

With reference to the above mentioned letters for the said subject matter, please find enclosed herewith the compliance to the conditions stipulated in the letters for the period of October 2017 -March-2018 in both hard & soft copy for your kind reference. The said period compliance is also being E-mailed on roez.bsr-mef@nic.in

Thanking you,

Yours<sub>t</sub>Sincerely,

(Subrat Tribath Chief Executive Officer 3 10 C

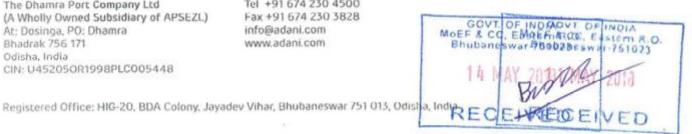
#### La Encl: As above

#### Copy to:

- 1) The Director (Monitoring -IA-III Division), Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi - 110003
- 2) Zonal Office, Central Pollution Control Board, Southern Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700 107 (W. B.)
- 3) The Member Secretary, State Pollution Control Board, Odisha, Parivesh Bhawan, A/118, Unit 8, Nilakantha Nagar, Nayapalli, Bhubneswar-751012
- 4) The Regional Officer, State Pollution Control Board, Odisha, 160, Sahadev Khunta, Balasore -756001
- 5) Member Secretary OCZMA & Director, Env-cum-Spl. Secretary to Govt., Forest & Env Dept., Govt. of Odisha, Plot No 108, Surya Nagar, Unit VII, Bhubaneswar-751003.

The Dhamra Port Company Ltd (A Wholly Owned Subsidiary of APSEZL) At: Dosinga, PO: Dhamra Bhadrak 756 171 Odisha, India CIN: U452050R1998PLC005448

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10.05.2018

Sr.	19 NO. PD/2601/18/98-PD2 (CR2)	· · · · · ·
No.	Conditions	Compliance Status
i	All Construction design/drawings relating to construction activities must have the approval of the concerned Government Departments/ Agencies of the State	Complied. Groundwater was not drawn during construction activities. The Project is
	Government of Odisha.	under Operation phase inline to Phase-I development.
	Ground water should not be tapped for construction activities as the drawl of	
	ground water for industrial use from the CRZ area is a prohibited activity.	
jj	Adequate provision for all infrastructural facilities such as water supply, fuel, sanitation etc. must be extended for laborers during the construction period in	Complied. Most of the construction labors are from nearby villages. Port has also provided labor colony for outside labors. All basic
	order to avoid damage to the environment.	facilities such as water supply, fuel, sanitation etc. are being provided.
iii	Dredging operations if any should be undertaken in consultation with the Central Water and Power Research Station, Pune or National Institute of Oceanography, Goa or any other authorized agency to ensure that dredging operations do not cause adverse impact on water quality and marine productivity in the vicinity. Dredging operation as far as possible should be kept to the minimum for avoiding any adverse impact on marine life.	Complied. The capital dredging has been completed in 2010-11. Marine water quality and productivity is being monitored by MoEF & CC accredited laboratory, there are no adverse impact on water quality and marine productivity in the vicinity. The details of Marine Water quality monitoring report for the period October 2017 – March 2018 is enclosed as <b>Annexure I.</b> No impact on water quality and marine productivity has been envisaged during this period. Complied.
10	should be so designed that the revised land use after dumping and changes in the land use pattern do no interfere with the natural drainage.	Complied.
v	To meet with any emergency situation, adequate foam containers should be kept ready with supporting firefighting system and water pipeline.	Complied. DPCL has a fire fighting team consisting of 32 crews including 1 officer, 1 supervisor, equipped with two fire tenders having water storage capacity of 4500 L and foam storage capacity of 500 L for each, and

Sr. No <i>.</i>	Conditions	Compliance Status
		CO2 (201 nos.) DCP (113 nos.) & Foam (11 nos.) type of extinguishers. Detail list of fire extinguishers is attached as Annexure-II.
vi	Staff posted in sensitive areas should be trained in implementation of the Crisis Management Plan already drawn by the authorities. Mock Drill(s) for this purpose should be on a regular basis. Provisions of Dock Safety Act and the Guidelines issued by the DG, FASLI/CLI, Mumbai for the safety and health of the workers should be followed.	Complied. The employees of DPCL have been trained on safety guidelines. Regular Mock Drills are conducted as per the Crisis Management Plan. The details of drills conducted towards dock safety for the period Oct 2017 - Mar 2018 is enclosed as <b>Annexure III</b> .
vii	For development of Green Buffer including mangroves wherever feasible, the authorities should start growing large nursery of multipurpose species such as Eucalyptus, Casuarina, Dalbergia, Terminalia etc. The norm of about 2000- 2500 trees per Hectare may be adopted for raising of green belt. Necessary permission may be obtained for cutting of trees, if any, for the project	Complied. A large nursery of multi species has been established for greenbelt development. DPCL has obtained Environment & CRZ clearance for Phase –II. Site is undergoing expansion inline to Immediate Development Plan (phase-II clearance). Greenbelt development shall also be developed inline to this. <b>Annexure IV.</b> Plantation has been done along the both edges of the 62.5 km rail corridor. Please refer <b>Annexure V</b> for photographs of the same.
vili	To prevent discharge of sewage and other liquid wastes including ballast into marine environment, adequate system for collection, treatment and disposal of liquid wastes must be provided to the satisfaction of the Odisha Pollution Control Board, Bhubaneswar.	Complied. DPCL has two nos. of Sewage Treatment Plant (STP) to handle 140 KLD & 15 KLD of sewage generated at port site & township. The treated water is being used for horticulture. The monitoring reports for the period Oct 2017- Mar 2018 are enclosed as <b>Annexure I.</b> All results are well within the prescribed standards MARPOL and Ballast Water Convention guidelines are enforced by DPCL for visiting ships.

Sr. No.	Conditions	Compliance Status
ix	Adequate noise control measures must be provided to noise levels at various work places within the standard prescribed by the competent authorities. If need be, ear plugs and ear muffs should be provided to the workers in the project area	Complied. Suitable personal protective equipment's (PPEs) (Ear muffs & ear plugs) are kept mandatory for workers in noise prone areas. Noise monitoring (once in a month) at site is being carried out by NABL and MoEF&CC accredited agency and levels have been found below the standards. The reports for the period Oct 2017 - Mar 2018 are enclosed as <b>Annexure I.</b>
X	The quality of treated effluents, solid wastes and emissions must confirm to the standards laid down by the competent authority including State Pollution Control Board, Govt. of Odisha, Bhubaneswar	Complied. DPCL has two nos. of Sewage Treatment Plant (STP) to handle 140 KLD & 15 KLD of sewage generated at port site & township. All the treated waste water from STP is being used for horticulture purpose. Monitoring is being carried out by NABL & MoEF&CC recognized laboratory. Monitoring reports for the period Oct 2017 - Mar 2018 are enclosed as <b>Annexure I.</b> All results are well within the prescribed standards. We have colour coded waste bins for segregating different category of solid waste. Waste generated is being handled in line to 5R concept of waste management, as per the Corporate vision of APSEZ to become "A Zero Waste Company" by the year 2020. Ambient Air Quality (Twice in a week) Monitoring is also being carried out by NABL & MoEF & CC accredited agency, Reports for the period Oct 2017 – Mar 2018 is enclosed as <b>Annexure I.</b> All emissions are well with
xi	An Environmental Cell should be set up immediately and made operational with adequate laboratory facilities, equipments and a mobile van for collecting air samples. The record and data should be submitted with proper analysis and	the prescribed standards. Complied. DPCL has a well-structured Environmental Management Cell, staffed with qualified man power at site supported by team at Head Office in Ahmedabad

Sr. No.	Conditions	Compliance Status
	corrective measures required, if any, for maintaining the levels within the prescribed limits to the Eastern Regional Office, Ministry of Environment & Forests, Govt of India, Bhubaneswar. The Environment Cell should coordinate and monitor environmental mitigative measures executed in the project area. The Project Proponent is advised to institutionalize their Environmental Monitoring through some recognized Scientific Institution for the project.	Environment monitoring is being carried out by NABL & MoEF&CC accredited agency, the monitoring results for the period Oct 2017 – Mar 2018 (enclosed in <b>Annexures I)</b> are well within the permissible limits. Monitoring data is being submitted along with half yearly compliance reports to the Eastern Regional Office, MoEF&CC, MoEF&CC New Delhi, CPCB-Kolkata and Odisha Pollution Control Board. Our Last Half Yearly compliance report was submitted on 23 <sup>rd</sup> Nov 2017.
xii	Necessary leakage detection devices with early warning system must be provided at strategic locations.	Not applicable at present. As presently no gaseous cargo is being handled by the port.
xili	Standby DG sets must be provided to ensure uninterrupted power supply (to) the pump house and the firefighting system	Complied. 5 stand by DG Sets, capacity ranging from 160 KVA to 200 KVA have been provided for emergency backups & uninterrupted power supply to the water supply system and firefighting system. DG set Monitoring (Half yearly basis) is being carried out by NABL & MoEF&CC recognized laboratory. Monitoring reports for the period Oct 2017 - Mar 2018 are enclosed as <b>Annexure I.</b> All results are well within the prescribed standards.
xiv	Third party inspection should be ensured during the construction and operational phases with adequate insurance cover. The Project authorities should confirm on regular intervals of six months to the Ministry about the implementation of the suggested safeguard measures and the data/report should be opened for inspection by the Team which would be constituted by the Ministry, If found necessary	Complied. Six monthly compliance reports are regularly submitted to the Eastern Regional Office of MoEF&CC, Bhubaneswar, MoEF&CC-New Delhi, CPCB-Kolkata, Odisha Pollution Control Board and Odisha Coastal Zone Management Authority. The last report was submitted on 23 <sup>rd</sup> Nov 2017. Officials from MoEF&CC Regional Office and OPCB are regularly inspecting the

Sr. No.	Conditions	Compliance Status
		project site. Safeguard measures as advised by inspection team are taken into consideration for implementation.
xv	Full support should be extended to the Eastern Regional Office, Ministry of Environment & Forests, Govt. of India, Bhubaneswar during inspection of the project for monitoring purposes by the project proponents by furnishing full details and action plans including action taken report on mitigative measures.	Complied. Full support is being extended to the Eastern Regional Office of Ministry of Environment & Forests & Climate Change, Bhubaneswar during their visit. Details required are being submitted to the Authorities.
xvi	Adequate funding provisions, year-wise and item-wise, must be made for implementation of the above mentioned safeguard measures.	Complied. Separate budget for the Environment Protection is earmarked every year. No separate bank account is maintained for the same however all the expenses are recorded in advanced accounting system of the organization. Budget for Environment Management measures for the FY 2017-18 is in the tune of Rs. 6.507 crore Detailed breakup of expenditure is enclosed as <b>Annexure-VI</b> .
xvii 1	Consultants Ltd. should be expedited. The project proponent was advised to keep in mind the proneness of the coast of Odisha to severe cyclonic storms while going ahead with their project. In case of any deviation or alteration in the project including the implementation agency, a fresh reference should be	Complied. The Rapid Environmental Impact Assessment Study was conducted in time & submitted. DPCL has already formulated detailed Disaster Preparedness & Management Plan to handle any natural calamities such as cyclones, storms, quakes etc., along the Coast. Complied and noted.
2	made to the Ministry for modification in the clearance condition or Imposition of new ones for ensuring environmental protection. The project authorities would be responsible for implementing the above suggested safeguard measures. The Ministry reserves the right to revoke	Point noted

Sr. No.	Conditions	Compliance Status
	clearance, if the conditions stipulated as	
1	above are not implemented to the	
	satisfaction of the Ministry	
3	These stipulations would be enforced	Point noted
	among others under the provisions of	
	Water (Prevention and control of	
	pollution) Act, 1974, the Air (Prevention	
	and control of pollution) Act, 1981, the	
	Environment (Protection) Act, 1986 and	
	the Public Liability (Insurance) Act, 1991	
1	along with their amendments and rules	
	from time to time.	

<u>Phase – II:</u> Compliance report of the condition stipulated in CRZ recommendation for Phase II expansion vide letter dated 20th December, 2012 bearing no. OCZMA-1/2012-13/No. 17

Sr. No.	Conditions	Compliance Status
1	The Ballast Water Management has to be	Complied.
	scrupulously followed to ensure that no harmful exotic organisms or pathogens	DPCL ensure that the ships visiting at port are in compliance to guidelines issued by
	are transferred to the coastal/marine	Ministry of Shipping Notification No
	water. In this regard, the DPCL should	13/2001.
	approach the Ministry of Shipping, Govt. of India to evolve a suitable ballast water	
	management plan to maintain the health	
	of the coastal/marine ecosystems	
2	The marine water and sediment	Complied.
	(biogeochemical parameters including	Monitoring of marine water and sediment
	phytoplankton community structure) should be monitored regularly by a	(biogeochemical parameters including
	reputed scientific institute/university	phytoplankton community structure) is being carried out by NABL & MoEF&CC
		accredited agency.
		Results of the same for the period
		Oct 2017 – Mar 2018 are enclosed as
	One of the objectives of the ODZ	Annexure – I.
3	One of the objectives of the CRZ guidelines is to ensure the livelihood of	Complied.
	the fishermen community vis-à-vis	INCOIS display board has been installed at fishing harbor, Dhamra. The same is in
	developmental acclivities. Hence the	working condition. (Please refer
	DPCL should approach the Director,	Annexure VII for Photograph of INCOIS

Phase – II: Compliance report of the condition stipulated in CRZ recommendation for Phase II expansion vide letter dated 20th December, 2012 bearing no. OCZMA-1/2012-13/No. 17

13/NO Sr.		
Sr. No.	Conditions	Compliance Status
	Indian National Centre for Ocean Information Services (INCOIS), Govt. of India, Hyderabad, to get PFZ advisories / installation of Electronic Display Board (EDB) to disseminate the prospective fishing ground information to the fishing community for their livelihoods. The DPCL is also to indicate any change that has occurred in the fishing zone due to operation of the Port.	displayed) DPCL provides support for repair services as and when required.
4	The use of unclaimed/salvaged coal for local people may be explored.	Complied. DPCL has examined this issue. So far there has not been any unclaimed coal and the quantity of salvaged coal is negligible. The procedure required under relevant rules is to auction such unclaimed coal with custom's permission to meet unpaid duties and port charges; and to account salvaged coal back to the stock of original importer. Any other method would contravene custom's and other laws.
5	DPCL shall ensure that the dust/fine grained particles of the jetty must be cleaned regularly and methodically so that there is no spillage to the coastal waters to avoid turbidity of the water column.	Complied. DPCL ensures that the dust/fine grained particles present on jetty are cleaned on regular basis both by mechanically and manually so to avoid spillage into the marine/coastal waters.
6	The mangrove vegetation around the port should be conserved both during construction and operation phase.	Complied. DPCL has taken great efforts by creating bamboo fencing around the present scattered mangroves towards southern boundary as well as carried out plantation of mangrove saplings in the blank patches since 2016 within the fenced area, as part of conservation efforts.
	,	Continuous awareness is being created among the port employees and workers regarding importance of mangrove and its conservation needs. However, due to cyclonic storms and biotic

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<u>Phase – II:</u> Compliance report of the condition stipulated in CRZ recommendation for Phase II expansion vide letter dated 20th December, 2012 bearing no. OCZMA-1/2012-13/No. 17

13/NO	.   <i>[</i>	· · · · · · · · · · · · · · · · · · ·
Sr. No.	Conditions	Compliance Status
		interference of local population there have been some damages on southern side scattered mangrove patch.
7	Coastal erosion and accretion shall be monitored on a regular basis. The impact of dredging and dumping of the sediment on Dhamra Shoreline change and on the ecologically sensitive areas including the Kanika Sand Islands has to be assessed at regular interval by a recognized institute.	Complied. NIOT Chennai, has carried out shoreline change study alongside Dhamra and Kanika sand shore and also impact of dredging and dumping of sediment on Dhamra Shoreline Change and on ecologically sensitive areas. Both this studies concludes that there are no significant impacts observed on the nearby ecologically sensitive areas because of this ongoing activity. Copy of the report was submitted to MOEF&CC vide our earlier half yearly compliance report dated 16.05.2017.
8	Provision shall be made for treatment/recycle of toxic contents, such as used oil, fertilizers (if any) and similar other toxic materials	Complied. DPCL has made an agreement with OSPCB approved vendor for collection of used oil. Details of the same are submitted to OSPCB as a part of Hazardous waste annual return (Form 4) on regular basis.
9	Environmental Impact Assessment (EIA) study of dredging material should be done on a regular basis with special emphasis to turbidity.	Complied. Offshore water quality monitoring is being done on regular basis (including turbidity parameter) and the results for the period Oct 2017 – Mar 2018 can be referred at Annexure-I.
10	The DPCL should ensure that the suspended sediments generated during excavation and during disposal of the dredged materials do not adversely affect the health of the coastal ecosystems within the port area including ecosensitive areas along the coast.	Complied. Complied. No capital dredging was carried out during the period Oct 2017 – Mar 2018. ~ 4.16 MM3 of Maintenance dredging was carried out during this period. This material is being disposed at approved location in the sea. Marine water quality monitoring is being carried out regularly & submitted to OSPCB Annexure - I.

<u>Phase – II:</u> Compliance report of the condition stipulated in CRZ recommendation for Phase II expansion vide letter dated 20th December, 2012 bearing no. OCZMA-1/2012-13/No. 17

Sr. No.	Conditions	Compliance Status
11	A conservation plan for Kanika Island will be prepared and implemented by the Forest Department, the cost of which will be met by the DPCL	Kanika Conservation Plan has been submitted to Principal Secretary, Forest & Environment Department for approval. Presentation on conservation plan was done by DFO to PCCF and was approved in the meeting. Approval is awaited from Forest department.
12	Mangrove plantation around the port will be protected by the DPCL under the supervision of the Forest Department.	Complied.
13	Shoreline Changes in and around Kanika Island shall be monitored on monthly basis	Complied. NIOT Chennai, has carried out shoreline change study at Dhamra and Kanika sand shore. Report was submitted vide earlier compliance submission dated 16.05.2017.

Sr. No.	Conditions	Compliance Status
6. Spe	ecific Condition	
i	Consent to Establishment shall be obtained from Odisha Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at site	Complied. Consent to Establish has been obtained.
ii .	Prior clearance from National Board of Wildlife shall be obtained	The project boundary falls outside the notified Eco sensitive zone of Bhitakranika and Gahirmatha Sanctuary, declared as per Gazette Notification 16.06.2015. The approved map from Forest department Govt of Odisha submitted vide our earlier half yearly compliance report. Copy of same in enclosed as <b>Annexure VIII.</b>
iii	The proponent shall submit undertaking that there shall be no acquisition of grazing/grave land for the project.	Complied. Undertaking has already been submitted vide our earlier compliance letter dated 20.11.2015.

Sr. No.	Conditions	Compliance Status
iv	The Regional Office of MoEF may conduct a site visit every year to verify compliance.	Point noted.
V	The Natural creek and drainage pattern of the area should not be disturbed and the cross drainage passing through cargo stack yards shall be released into settling ponds as committed.	Complied. Drainage pattern is being maintained. The creeks are trained to ensure proper drainage both from outside and inside. Runoff from the cargo stack yard is diverted to settling pond. Supernatant water after primary treatment is being used for dust suppression.
vi	No housing component is permitted in CRZ area i.e. within 500m from HTL.	Complied. No housing constructed in CRZ area.
Vii	The dredging materials shall be at depths 25m or more up to fill up of 30cm or less. Initial and final sounding records for depth of the disposal sites and GPS records shall be maintained for vessels carrying out disposal. The disposal shall be carried out in the ebb tides and shall be ensured that water quality (SS less than 500mg/l) is maintained during disposal near the vessel.	Complied. No capital dredging was carried out during the period Oct 2017 – Mar 2018. ~ 4.16 MM3 of Maintenance dredging was carried out during this period. This material is being disposed at approved location in the sea. Marine water quality monitoring is being carried out regularly & submitted to OSPCB. Copy enclosed as <b>Annexure I.</b>
Viii	Commitment for all the recommendations provided by OCZMA and NIO for protection of Kanika island and earmark specific amount for the conservation plan. The plan can be prepared in consultation with the OCZMA and forest department.	Complied. Kanika Conservation Plan has been submitted to Principal Secretary, Forest & Environment Department for approval. Presentation on conservation plan was done by DFO to PCCF and was approved in the meeting. Approval is awaited from Forest department.
ix	The village forest adjacent to the project site should be developed with tree plantation, in consultation with the revenue department/forest department	The district administration has stipulated certain condition and has asked DPCL to prepare a plantation scheme for the purpose, which is under progress.
x	As discussed during the meeting the dumping area should be at the latitude 20° 55' 5" and longitude 87° 10' 5" in the offshore region	Point noted.

Cleara		on stipulated in Environmental and CRZ ed 1st January, 2014 bearing F. No. 11- ted 25 <sup>th</sup> March, 2015					
Sr. No.	Conditions	Compliance Status					
xi	All the commitments made during the Public Hearing shall be complied with.	are being complied.					
xii	Regular air quality monitoring should be conducted at the site and all the parameters should be within limits.	Complied. Air quality monitoring is done by a MoEF&CC accredited agency and all parameters are well within standards Results of the monitoring carried out during the period Oct 2017- Mar 2018 are enclosed as <b>Annexure</b> – <b>I</b> .					
xiii	All the recommendation of the EIA/EMP & Risk Assessment and Disaster Management Report shall be complied with letter and spirit. 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 MoEF along with half yearly compliance report to MoEF- RO.	Complied. Compliance towards mitigation plans are enclosed as <b>Annexure IX.</b>					
xiv	All the recommendations and conditions stipulated by Odisha Coastal Zone Management Authority (OCZMA) No. OCZMA-1/2012-13 dated 20.12.2012 shall be complied with	Complied. Compliance report of the OCZMA recommendation is enclosed.					
XV	The green belt shall be provided all around the periphery and storage yards.	Complied. Site is undergoing expansion inline to Immediate Development Plan (phase-II clearance). Greenbelt development shall also be developed inline to this. Layout enclosed as <b>Annexure IV</b> .					
		Plantation has been done along the both edges of the 62.5 km rail corridor. Please refer <b>Annexure V</b> for photographs of the same.					
xvi	There shall be no ground water drawal within CRZ area	Complied. No ground water withdrawal in the CRZ area is done					
xvii	Sewage shall be treated and the Treatment Facility shall be provided in accordance with the Coastal Regulation	Complied. DPCL has two nos. of Sewage Treatment Plant (STP) of capacity 140 KLD & 15 KLD					

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Sr. No.	Conditions	Compliance Status
	Zone Notification, 2011. The disposal of treated water shall confirm the regulation of State Pollution Control Board.	to treat sewage generated at port site & township. Treated water of STP is regularly monitored and all the results are found to be well within the prescribed standard. The monitoring report for the period Oct 2017– Mar 2018 is enclosed as <b>Annexure-I</b> .
xviii	Solid Waste Management shall be as per Municipal Solid (Management and Handling) Rules, 2000	Complied. DPCL has developed a vision for making itself "A Zero Waste Port" by the year 2020. DPCL vision is based on adoption of 5R principle of waste management i.e Reduce, Reuse, Reprocess, Recycle & Recover. We have colour coded bins for segregating different category of solid waste. Biodegradable wastes are used for compost preparation. Recyclable wastes are handed over to authorized recyclers.
xix	The project shall be executed in such a manner that there shall not be any disturbance to the fishing activity.	Complied. Approach channel of the port is from South to North east, whereas Fishing boats travels from South to East. Apart Fishing is carried out in deep Sea. Hence, no impact on fishing is envisaged because of this project.
XX	It shall be ensured that there is no displacement of people, houses or fishing activity as a result of the project.	Complied. Proposed development is in intertidal area and hence forth there has not been any displacement of people and the houses. Suitable approaches are available for fishermen to conduct their activities and hence, there won't be any impact on fishing activities. DPCL is closely working with fishermen communities to provide them required support through its CSR activities.
xxi	No construction work other than those permitted in Coastal Regulation Zone	Complied. Construction work is being carried out

Sr. No.	Conditions	Compliance Status
	Notification shall be carried out in Coastal Regulation Zone area.	inline to CRZ notification 2011, amended till date and Environment / CRZ clearances obtained for the project.
xxii	The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a senior executive	Complied. DPCL has a well-structured Environmental Management Cell, staffed with qualified personnel at site supported by team at Head Office in Ahmedabad.
xxiii	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.	Complied. Separate budget for the Environment Protection is earmarked every year. No separate bank account is maintained for the same however all the expenses are recorded in advanced accounting system of the organization. Budget for Environment Management measures for the FY 2017-18 is in the tune of Rs. 6.507 crore. Detailed breakup of expenditure is enclosed as <b>Annexure-VI</b> .
7. Gei i	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	Complied
ji	Full support shall be extended to the officers of this Ministry/Regional Office at	DPCL is always extending full support to the regulatory authorities during their visit to port site. Details sought for by the Authorities are furnished as and when
jii	A six-monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bhubaneswar regarding the implementation of the stipulated conditions.	Complied. Six monthly compliance report is regularly submitted to Regional Office of MoEF & CC, Bhubaneswar. Last compliance report for Apr 2017 – Sept 2017 period was submitted vide our letter dated 23.11.2017.

Sr. No.	Conditions	Compliance Status
iv	Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.	
V	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.	Point noted
vi	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.	No change in the project profile or implementing agency of the development at Dhamra Port. However DPCL has now proposed Revised Master Plan for Dhamra Port for which, necessary procedure inline to the EIA notification 2006 & CRZ Notification 2011, has already been initiated.
vii	The project proponents 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 and the date of start of land development work.	DPCL had informed the Regional Office MOEF& CC regarding the financial closure and the date of start of land development work. Date of last financial closure was on 30th September, 2014. The same has been submitted vide our earlier compliance submitted to RO-MOEF&CC, Bhubaneshwar
viii	A copy of the clearance letter shall be marked to concern Panchayat/local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal.	Complied. Copy of clearance letter was submitted to concerned panchayat office vide our letter dated 23.01.2014 for any suggestion. The copy is enclosed as <b>Annexure-X</b> .
ix	Odisha State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's Office/Tehsildar's office for 30 days.	-
8	These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention	Point noted

Sr.	Conditions	Compliance Status
No.		
	and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the	
	Public Liability (Insurance) Act 1991 and	
	EIA Notification 1994, including the	
	amendments and rules made thereafter.	
9	All other statutory clearances such as the	Complied
		License on storage of explosives from
	Controller of Explosives, Fire	
	Department, Civil Aviation Department,	enclosed as Annexure-XI.
	Forest Conservation Act, 1980 and	
	Wildlife (Protection) Act, 1972 etc. shall	
	be obtained, as applicable by project	
	proponents from the respective	
	competent authorities.	
10	The project proponent shall advertise in	Complied.
	at least two local Newspapers widely	Advertisement copies are attached as
	circulated in the region, one of which	Annexure-XII.
	shall be in the vernacular language	
	informing that the project has been	
	accorded Environmental and CRZ	
	Clearance and copies of clearance letters	
	are available with the Odisha State Pollution Control Board and may also be	
	seen on the website of the Ministry of	
	Environment and Forests at	
	http://www.envfor.nic.in. The	
	advertisement should be made within 10	
	days from the date of receipt of the	
	Clearance letter and a copy of the same	
	should be forwarded to the Regional	
	Office of this Ministry at Bhubaneswar.	
11	This clearance is subject to final order of	Point noted
	the Hon'ble Supreme Court of India in the	
	matter of Goa Foundation Vs. Union of	
	India in Writ Petition (Civil) No. 460 of	
10	2004 as may be applicable to this project.	
12	Any appeal against this clearance shall	Point noted
	lie with the National Green Tribunal, if	
	preferred, within a period of 30 days as	
L	prescribed under Section 16 of the	

Sr. No.	Conditions	Compliance Status
	National Green Tribunal Act, 2010.	
13	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were	Complied. Compliance report for each period is uploaded on the company's website (http://www.adaniports.com/ports- downloads) and the same is being updated twice in a year. Complied. Copy of clearance letter was submitted to concerned panchayat office vide our letter dated 23.01.2014 for any suggestion. The copy is enclosed as <b>Annexure-X</b> .
	received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	
15	The proponent shall upload the status of compliance of the stipulated clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the representative Zonal Office of CPCB and the SPCB.	Compliance report for each period is uploaded on the company's website and the same is being updated twice in a year. Results of environmental monitoring are enclosed as <b>Annexures I</b> to the compliance report. Hard copy as well as soft copy of the same are submitted to all concerned authorities.
16	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated clearance conditions including results of monitored data (both in hard copies as well as by e- mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	Complied. Compliance report for each period is uploaded on the company's website and the same is being updated twice in a year. Results of environmental monitoring are enclosed as <b>Annexures I</b> to the compliance report. Hard copy as well as soft copy (Email) of the same are submitted to all concerned authorities.
17	The environmental statement for each financial year ending 31st March in Form- V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed	Complied. Environmental statement for FY 2016-17 was submitted to OSPCB with a copy to the Regional Office of MoEF & CC vide our letter no DPCL/ENV/OSPCB/2017-45

Sr. No.	Conditions	Compliance Status				
	under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the	dated 18 <sup>th</sup> Sep 2017. Copy of the same is enclosed as <b>Annexure – XIII.</b>				
Condi	company along with the status of compliance of clearance conditions and shall also be sent to the respective Regional Office of MoEF by email. tions stipulated in the amendment dated	All Submitted Environment Statements as well as Half Yearly Compliance Reports are available on our company website and can be viewed publicly				
i	The port shall ensure that the ships under operation follow the MARPOL Convention with regard to discharge or spillage of any toxic, hazardous or polluting material like ballast water, oily water or sludge, sewage, garbage etc.	Complied. MARPOL and Ballast Water Convention guidelines are enforced by DPCL for visiting ships.				
ii	Dust screens shall be provided with height of two meter above the stack height. Water sprinkling shall be carried out for settling dust. Three layers of green belt of tall growing tress shall be provided on all sides of the stack area.	Complied. Site is undergoing expansion inline to Revised Master Plan. Stack yards expansions are planned accordingly. Detailed engineering design for dust screen will be prepared inline to Site condition and further be implemented. Water sprinkling is being done on regular basis to ensure dust suppression in cargo storage area and vehicular paths/roads. Greenbelt development shall also be developed inline Revised Master Plan.				
iti	Transportation of iron ore shall be by covered conduit/closed trucks/rails only. Closed conveyor belt shall be used for unloading the product.	Transportation of Coal/Iron ore is done in				
iv	Water sprinklers will be provided in the area of ore storage and vehicular path/roads.	Complied. Water sprinkling is being done on regular basis to ensure dust suppression in coal storage area and vehicular paths/roads.				
v	All the recommendations of EMP and Disaster Management Plan (DMP) shall be complied with	Complied. Compliance of EMP is enclosed as Annexure IX.				

#### LIST OF ANNEXURES

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<u>S. No</u>	Annexure Number	Details						
1	Annexure-I	Environment Monitoring Report						
2	Annexure-II	Types and quantity of Fire Extinguishers						
3	Annexure-III	Details of Mock Drills						
4	Annexure-IV	Port layout						
5	Annexure-V	Green belt development Photographs						
6	Annexure-VI	Cost Break up of Environment Expenditure						
7	Annexure-VII	INCOIS Board						
8	Annexure-VIII	MoEFCC intimation letter						
9	Annexure-IX	EMP & Action Plan Compliance						
10	Annexure-X	Environmental Clearance copy to Zillaparisad						
11	Annexure-XI	License and NOC from Fire Dept.						
12	Annexure-XII	Advertisement in Local Newspapers intimating grant of Environmental & CRZ Clearance						
13	Annexure-XIII	Environment Statement for FY 2016-17						

# **ANNEXURE-I**

# **ENVIRONMENT MONITORING REPORT**

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# CENTRE FOR ENVOTECH AND MANAGEMENT CONSULTANCY PVT. LTD.

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Report no. - CEMC/TDPCL/031117/A1

Issued Date-03.11.2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03112017A1
Nature of Sampling	Ambient Air Sample
Sampling Location	Colony Area
Sampling By	Mr. Biswaranjan Behera
Sampling Duration	01.10.2017 to 31.10.2017

(	Date	РМ <sub>10</sub> (µg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	$\frac{SO_2}{(\mu g/m^3)}$	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	
ć.	03.10.2017	52.5	26.1	6.9	11.9	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
• •	09.10.2017	47.4	23.5	6.7	12.3	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
$\sim$	11.10.2017	54.7	27.2	6.8	12.5	0.3	<20	<10	<0.06	<0.6	<0.44	_<5	<1
	13.10.2017	58.5	28.9	6.9	12.1	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
~	17.10.2017	56.2	27.8	6.7	11.8	0.2	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
`	21.10.2017	49.4	24.3	6.6	12.1	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
	24.10.2017	54.6	26.7	6.8	12.3	0.2	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
	27.10.2017	56.3	25.4	6.9	12.4	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
	31.10.2017	57.8	22.6	6.7	11.8	0.3	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
-	NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
F	Methods of Analysis		Gravimetric Method as per CPCB method	IS: 5182 (Part- 2)	IS: 5182 (Part- 6)	IS: 5182 (Part- 10)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part- 9)	IS: 5182 (Part- 22)	followed	As per CPCB method followed by AAS	<b>`11</b> )	IS: 5182 (Part- 12)

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

# Dr.T. Situa PAD Env. Sc. Authorized Signatory No. Sc.



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Report no. - CEMC/TDPCL/031117/A2

Issued Date-03.11.2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03112017A2
Nature of Sampling	Ambient Air Sample
Sampling Location	Kanakaprasad Village
Sampling By	Mr. Biswaranjan Behera
Sampling Date	01.10.2017 to 31.10.2017

Date	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	03	Pb	Ni	As	Benzene	BaP
	$(\mu g/m^3)$	$(\mu g/m^3)$	(µg/m <sup>3</sup> )	(µg/m³)	$(mg/m^3)$	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m³)	$(ng/m^3)$	$(ng/m^3)$	(µg/m³)	(ng/m <sup>3</sup>
03.10.2017	41.4	20.2	6.8	12.2	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
09.10.2017	39.7	19.7	6.6	12.0	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
11.10.2017	45.8	22.9	6.9	12.3	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
13.10.2017	47.4	23.8	7.0	12.4	0.3	<20	<10	< 0.06	<0.6	< 0.44	<5	<[
17.10.2017	44.2	22.7	6.7	11.9	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
21.10.2017	40.3	21.1	6.8	12.1	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
24.10.2017	46.2	23.5	6.9	12.3	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
27.10.2017	47.4	24.6	7.0	12.3	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
31.10.2017	48.2	23.4	7.1	12.0	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimet ric Method as per CPCB method	IS: 5182 (Part- 2)	IS: 5182 (Part- 6)	IS: 5182 (Part- 10)	Indophen ols Blue Method followed by CPCB	15: 5182 (Part- 0)			As per CPCB method followe d by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

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

#### Dr. T. Beby, PhD. Env. Sc. Author and Sharing St. (GNDEFTE HONBOR, Dt. 03-06-2016)

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Report no. - CEMC/TDPCL/031117/A3

Issued Date-03.11.2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03112017A3
Nature of Sampling	Ambient Air Sample
Sampling Location	Near BMH
Sampling By	Mr. Biswaranjan Behera
Sampling Date	01.10.2017 to 31.10.2017

-	Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	$PM_{2.5}$ (µg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	$\frac{\rm NH_3}{(\mu g/m^3)}$	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Рb (µg/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m <sup>3</sup> )
	03.10.2017	41.8	21.2	7.1	12.7	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
Ì	09.10.2017	39.5	20.1	6.9	11.9	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	11.10.2017	42.7	22.3	7.2	12.3	0.3	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
	13.10.2017	45.3	22.9	7.3	12.1	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
~	17.10.2017	48.9	25.1	6.8	12.6	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	21.10.2017	41.2	20.9	7.0	11.8	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	24.10.2017	43.5	22.2	7.2	12.4	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
	27.10.2017	44.3	21.1	7.3	12.2	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
-	31.10.2017	48.4	22.9	7.0	11.9	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
	NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
1	Methods of Analysis	IS: 5182 (Part- 23)	Gravimet ric Method as per CPCB method	IS: 5182 (Part- 2)	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	Indoph enol Blue Metho d followe d by CPCB	IS: 5182 (Part-	IS: 5182 (Part- 22)	CPCB method	As per CPCB method followe d by AAS		IS: 5182 (Part- 12)

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

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Report no. - CEMC/TDPCL/031117/A4

Issued Date-03.11.2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03112017A4
Nature of Sampling	Ambient Air Sample
Sampling Location	Near Jetty
Sampling By	Mr. Biswaranjan Behera
Sampling Date	01.10.2017 to 31.10.2017

Date	PM <sub>10</sub>	$PM_{2.5}$	$SO_2$	NOx	CO	NH <sub>3</sub>	$O_3$	Pb	Ni	As	Benzene	
	(µg/m³)	(µg/m³)		$(\mu g/m^3)$							(µg/m <sup>3</sup> )	(ng/m <sup>2</sup>
03.10.2017	68.5	34.9	7.1	12.5	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
09.10.2017	64.7	33.1	7.2	12.0	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
11.10.2017	70.4	35.8	6.8	11.9	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
13.10.2017	73.5	37.3	7.0	12.2	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
17.10.2017	71.3	35.7	7.1	12.4	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
21.10.2017	64.1	33.2	6.9	11.9	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
24.10.2017	67.2	34.1	7.2	12.0	0.3	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
27.10.2017	77.6	42.5	6.9	12.3	0.3	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
31.10.2017	82.7	44.9	7.1	12.1	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimet ric Method as per CPCB method	IS: 5182	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	Method	IS:	(Part-	CPCB method	As per CPCB method followe d by AAS	15: 5182 (Part-	IS: 518 (Part- 12)

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

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Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.



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Report no. - CEMC/TDPCL/031117/A5

Issued Date-03.11.2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak					
Work Order No.	4800026792, dtd-22.07.2017					
Reference No.	CEMC-03112017A5					
Nature of Sampling	Ambient Air Sample					
Sampling Location	Dosinga Village					
Sampling By	Mr. Biswaranjan Behera					
Sampling Date	01.10.2017 to 31.10.2017					

	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	O <sub>3</sub>	Pb	Ni	As	Benzen	BaP
Date	(µg/m <sup>3</sup>	(µg/m³)	(µg/m³)	(μg/m³)	(mg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	$(\mu g/m^3)$	(μg/m <sup>3</sup> )	(ng/m³)	(ng/m³)	e	(ng/m <sup>3</sup>
· · · · ·	)										$(\mu g/m^3)$	
03.10.2017	43.7	22.1	7.0	11.8	0.2	<20_	<10	<0.06	<0.6	<0.44	<5	<1
09.10.2017	40.1	20.8	6.8	_ 12.0	0.2	<20	<10	<0.06	<0.6	<0.44	<5	
11.10.2017	44.7	23.2	7.2	12.2	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
13.10.2017	49.3	25.1	7.3	11.9	0.2	<20	<10	<0.06	<0.6	< 0.44	<5	<1
17.10.2017	48.4	24.7	7.2	12.0	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
21.10.2017	41.2	21.3	6.8	11.8	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
24.10.2017	43.8	22.6	7.2	12.1	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
27.10.2017	48.2	23.6	6.9	12.2	0.2	<20	<10	<0.06	<0.6	< 0.44	<5	<1
31.10.2017	49.8	24.7	7.1	11.9	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimet ric Method as per CPCB method	IS: 5182 (Part-2)	19: 2197	(Part-	Indophe nols Blue Method followed by CPCB	IS: 5182 (Part-9)		CPCB method	As per CPCB method followe d by AAS	/Port_	IS: 5182 (Part- 12)

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

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Notes: Ovt %



- result given above related to the tested sample he customer asked for the above test (GAZETTE NO Q, only
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Report no. - CEMC/TDPCL/031117/A6

Issued Date-03.11.2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak						
Work Order No.	4800026792, dtd-22.07.2017						
Reference No.	CEMC-03112017A6						
Nature of Sampling	Ambient Air Sample						
Sampling Location	Bhitarkanika (Eco Sensifive)						
Sampling By	Mr. Biswaranjan Behera						
Sampling Date	01.10.2017 to 31.10.2017						

	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	<b>O</b> 3	Pb	Ni	As	Benzen	
Date	(µg/m <sup>3</sup>	(µg/m <sup>3</sup> )	(µg/m³)	(µg/m <sup>3</sup> )	(mg/m³)	$(\mu g/m^3)$	(µg/m³)	(µg/m³)	(ng/m³)	(ng/m³)	e	(ng/m <sup>3</sup>
											(µg/m <sup>3</sup> )	
03.10.2017	41.2	21.1	6.7	10.3	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	< <u> </u>
09.10.2017	38.4	19.6	6.5	10.5	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
11.10.2017	41.3	20.8	6.3	10.8	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
13.10.2017	44.8	23.2	6.8	10.6	0.1	<20	<10	< 0.06	<0.6	<0.44	<5	<1
17.10.2017	46.5	24.1	6.9	10.7	0.1	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
21.10.2017	40.2	20.9	6.6	10.9	0.2	<20	<10	< 0.06	< 0.6	< 0.44	<5	<1
24.10.2017	43.3	21.7	6.5	11.1	0.1	<20	<10	< 0.06	<0.6	<0.44	<5	<1
27.10.2017	42.5	22.6	6.7	11.3	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
31.10.2017	47.8	24.9	6.8	11.4	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
NAAQ Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimet ric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	15: 5184 (Part-	Indophe nol Blue Method followed by CPCB	IS: 5182	IS: 5182 (Part- 22)	CPCB method	As per CPCB method followe d by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

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

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Report no. - CEMC/TDPCL/031117/N

Issued Date-03.11.2017

#### NOISE LEVEL MONITORING REPORT

Issued to	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Analysis No.	CEMC/TDPCL-D00N1
Nature of Sampling	Noise Sample
Sampling By	Mr. Biswaranjan Behera
Sampling Date	01.10.2017 to 31.10.2017

Data	Location	NL D	ay Time d	<b>B</b> (A)	NL Night Time dB (A)			
Date		Max	Min,	Avg.	Max.	Min.	Avg.	
13.10.2017	Colony Area (R)	54.3	50.7	52.5	42.1	39.4	40.8	
17.10.2017	Kanakaprasad Village (R)	53.8	49.6	51.7	41.9	38.8	40.4	
21.10.2017	Near BMH (I)	71.4	68.7	70.1	67.8	66.3	67.1	
24.10.2017	Near Jetty (I)	71.9	69.2	70.6	69.4	63.8	66.6	
27.10.2017	Dosinga village (R)	53.7	49.9	51.8	44.1	39.2	41.7	
11.10.2017	Bhitarkanika (R)	50.2	47.1	48.6	41.8	37.9	<u>39.9</u>	

\*NL- Noise Level, I- Industrial, R- Residential

#### National Standard of Noise Level

Area	Category of Area/Zone	A Permissible Linut in dB(A)				
Code	Category of Area/20ne	Day Time	Night Time			
A	Industrial Area	75	70			
В	Commercial Area	65	55			
C	Residential Area	55	45 .			
D	Silence Zone	50	40			

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Report no. - CEMC/TDPCL/031117/W1

Issued Date-03.11.2017

#### STP REPORT

Name & Address of the Customer

Work Order No. Sampling by Date of Sampling **Date of Receiving** Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak

- : 4800026792, dtd-22.07.2017
- : Biswaranjan Behera
- : 11.10.2017 & 21.10.2017
- : 12.10.2017 & 22.10.2017
- : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 15 KLD (Inlet-CEMC/17-18/255W &
- 268W)
- : CEMC-03112017(255&268)W

**Reference Number** 

#### STP INLET RESULT

		TL. S. F	Res	sult	Design personator for Dow
SI. No.	Parameter	Unit of Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design parameter for Raw Sewage
1	Appearance		Turbid	Turbid	-
2	Colour		Blackish	Blackish	-
3	Odour		Foul	Foul	-
4	pH Value @ 25°C		6.71	6.79	6.0-8.5
5	Total Suspended Solids	mg/l	139.6	148.2	1000
6	B.O.D for 3 days @ 27°C	mg/l	170	150	300-350
7	Oil & Grease	mg/l	<5	<5	100
8	COD	mg/l	460	440	
9	Ammonical Nitrogen	mg/l	6.9	6.7	
10	Total Nitrogen	mg/l	41.2	33.6	
11	Faecal Coliform	MPN/100ml	900	900	·

# Env. Sc. Notes: Gov



- ab96e4e1ated to the tested sample. (GAZETTE Neili e customer asked for the above test only.
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Report no. - CEMC/TDPCL/031117/W2

Issued Date-03.11.2017

#### STP REPORT

Name & Address of the Customer

Work Order No. Sampling by Date of Sampling **Date of Receiving** Sampling & Testing Procedure Sample Description Sample Ouantity Sample Location with Job Code

: M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak : 4800026792, dtd-22.07.2017 : Biswaranjan Behera : 11.10.2017 & 21.10.2017 : 12.10.2017 & 22.10.2017 : APHA 23<sup>rd</sup> Edition : Waste Water : 1.0 Ltr each : STP - 15 KLD (Outlet-CEMC/17-18/256W & 269W) : CEMC-03112017(256&269)W

**Reference Number** 

#### STP OUTLET RESULT

SI.		Unit of	Res	ult	Standards for New STPs
No.	Parameter	Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design after notification 2015
1	Appearance		Clear	Clear	•
2	Colour		Colorless	Colorless	-
3	Odour		Odourless	Odourless	-
4	pH Value @ 25°C		7.08	7.03	6.5-9.0
5	Total Suspended Solids	mg/l	19.2	17.9	<20
6	B.O.D for 3 days @ 27°C	mg/l	9.2	8.8	<10
7	Oil & Grease	mg/l	<5	<5	
8	COD	mg/l	44	36	<50
9	Ammonical Nitrogen	mg/l	1.7	1.5	<5
10	Total Nitrogen	mg/l	10.8	10.1	<10
11	Faecal Coliform	MPN/100ml	35	35	<100

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- 03-06-2016) en above related to the tested samp The customer asked for the above test 1 83 only.
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#### Report no. - CEMC/TDPCL/031117/W3

Issued Date-03.11.2017

#### STP REPORT

Name & Address of the Customer

Work Order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code

- : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
- : 4800026792, dtd-22.07.2017
- : Biswaranjan Behera
- : 11.10.2017 & 21.10.2017
- : 12.10.2017 & 22.10.2017
- : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 140 KLD (Inlet-CEMC/17-18/257W &
- 270W)
- : CEMC-03112017(257&270)W

#### **Reference Number**

#### STP INLET RESULT

	· · · · · · · · · · · · · · · · · · ·	TLUE	Res	sult	Design representation for Darry
SI. No.	Parameter	Unit of Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design parameter for Raw Sewage
1	Appearance		Turbid	Turbid	-
2	Colour		Blackish	Blackish	-
3	Odour		Foul	Foul	-
4	pH Value @ 25°C		6.73	6.91	6.0-8.5
5	Total Suspended Solids	mg/l	171.2	156.4	1000
6	B.O.D for 3 days @ 27°C	mg/l	200	170	300-350
7	Oil & Grease	mg/l	6.7	6.5	100
8	COD	mg/l	880	820	
9	Ammonical Nitrogen	mg/l	8.9	8.2	
10	Total Nitrogen	mg/l	54.7	43.2	
11	Faecal Coliform	MPN/100ml	>1600	>1600	

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Report no. - CEMC/TDPCL/031117/W4

Issued Date-03.11.2017

#### STP REPORT

Name & Address of the Customer

Work Order No. Sampling by Date of Sampling **Date of Receiving** Sampling & Testing Procedure **Sample Description** Sample Quantity Sample Location with Job Code

**Reference Number** 

: M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak : 4800026792, dtd-22.07.2017 : Biswaranjan Behera : 11.10.2017 & 21.10.2017 : 12.10.2017 & 22.10.2017 : APHA 23<sup>rd</sup> Edition : Waste Water : 1.0 Ltr each : STP - 140 KLD (Outlet-CEMC/17-18/258W & 271W) : CEMC-03112017(258&271)W

#### STP OUTLET RESULT

61		Unit of	Res	ult	Standards for New STPs		
SI. No.	Parameter	Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design after notification 2015		
1	Appearance		Clear	Clear	•		
2	Colour		Colorless	Colorless	-		
3	Odour		Odourless	Odourless	-		
4	pH Value @ 25°C		7.17	7.21	6.5-9.0		
5	Total Suspended Solids	mg/l	18.7	19.1	<20		
6	B.O.D for 3 days @ 27°C	mg/l	9.6	9.2	<10		
7	Oil & Grease	mg/l	<5	<5			
8	COD	mg/l	44	40	<50		
9	Ammonical Nitrogen	mg/l	2.8	2.3	<5		
10	Total Nitrogen	mg/l	7.1	6.7	<10		
11	Faecal Coliform	MPN/100ml	47	35	<100		

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eal of Laboratory

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#### Report no. - CEMC/TDPCL/021217/A1

Issued Date-02.12.2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02122017A1
Nature of Sampling	Ambient Air Sample
Sampling Location	Colony Area
Sampling By	Mr. Biswaranjan Behera
Sampling Duration	01.11.2017 to 30.11.2017

Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	РМ <sub>2.5</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH3 (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m <sup>3</sup> )
05.11.2017	58.5	29.8	7.1	12.2	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
07.11.2017	56.7	28.9	6.9	11.8	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
10.11.2017	49.8	25.1	7.0	12.1	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
13.11.2017	54.4	27.7	7.1	12.2	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
18.11.2017	41.7	21.2	6.8	11.8	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
21.11.2017	49.2	25.3	6.9	11.9	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
24.11.2017	57.3	28.9	7.0	12.1	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
28.11.2017	56.7	28.2	7.1	12.2	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Method as	IS: 5182 (Part-2)	19: 2197	I Port_	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-9)	IS: 5182 (Part- 22)	followed	As per CPCB method followed by AAS	IȘ: 5182 ¨ (Part- 11)	IS: 5182 (Part- 12)

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

DI.T. SaulwPhD, Env. Sc. Authorsed Signation VST Notes-



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Report no. - CEMC/TDPCL/021217/A2

#### Issued Date-02.12.2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02122017A2
Nature of Sampling	Ambient Air Sample
Sampling Location	Kanakaprasad Village
Sampling By	Mr. Biswaranjan Behera
Sampling Date	01.11.2017 to 30.11.2017

Date	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	03	Pb	Ni	As	Benzene	BaP
	(µg/m³)	(µg/m³)	(µg/m')	$(\mu g/m^3)$	$(mg/m^3)$	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(ng/m <sup>3</sup> )	$(\mu g/m^3)$	(ng/m <sup>3</sup>
05.11.2017	51.6	25.9	7.0	11.9	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
07.11.2017	48.7	24.6	6.8	12.1	0.3	<20	<10	<0.06	<0.6	< 0.44	<5	<1
10.11.2017	53.0	26.8	7.1	12.2	0.4	<20	<10	. <0.06	<0.6	<0.44	<5	<1
13.11.2017	49.5	25.1	6.9	12.1	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
18.11.2017	37.3	19.2	7.0	12.2	0.3	<20	<10	<0.06	<0.6	< 0.44	<5	<1
21.11.2017	45.7	23.8	7.1	12.3	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
24.11.2017	52.3	26.5	6.8	11.9	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
28.11.2017	54.5	27.9	6.9	12.0	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)		IS: 5182		IS: 5182 (Part-10)	Indophen ols Blue Method followed by CPCB			As per CPCB method followe d by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part- 12)

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

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Report no. - CEMC/TDPCL/021217/A3

Issued Date-02.12.2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02122017A3
Nature of Sampling	Ambient Air Sample
Sampling Location	Near BMH
Sampling By	Mr. Biswaranjan Behera
Sampling Date	01.11.2017 to 30.11.2017

Date	РМ <sub>10</sub> (µg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	О3 (µg/m <sup>3</sup> )	Pb (µg/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m <sup>3</sup> )
05.11.2017	48.9	25.1	7.3	12.5	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
07.11.2017	52.7	26.8	7.1	12.3	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
10.11.2017	54.5	27.7	6.9	12.1	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
13.11.2017	50.2	25.5	7.2	12.3	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
18.11.2017	40.8	21.1	6.9	11.9	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
21.11.2017	51.5	26.2	7.1	12.2	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
24.11.2017	53.0	26.9	7.3	12.6	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
28.11.2017	55.8	28.3	7.1	12.3	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	as ner	IS: 5182	IS: 5182 (Part-6)	IS: 5182	Ivietnoa	IS: 5182	IS: 5182 (Part-22)			IS: 5182 (Part-11)	IS: 5182 (Part- 12)

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

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Report no. - CEMC/TDPCL/021217/A4

Issued Date-02,12,2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak	
Work Order No.	4800026792, dtd-22.07.2017	
Reference No.	CEMC-02122017A4	
Nature of Sampling	Ambient Air Sample	
Sampling Location	Near Jetty	
Sampling By	Mr. Biswaranjan Behera	
Sampling Date	01.11.2017 to 30.11.2017	

Date	PM10	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	<b>O</b> <sub>3</sub>	Pb	Ni 3	As	Benzene	BaP
	(µg/m³)	(µg/m³)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	$(mg/m^3)$	(µg/m')	(µg/m <sup>3</sup> )	(µg/m³)		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup>
05.11.2017	83.5	42.8	7.3	12.7	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
07.11.2017	81.7	41.3	7.5	12.9	0.4	<20	<10	<0.06	<0.6	< 0.44	<5	<1
10.11.2017	79.0	40.6	7.1	12.2	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
13.11.2017	80.3	43.1	7.2	12.3	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
18.11.2017	70.4	35,9	7.0	12.1	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
21.11.2017	81.5	40.9	7.4	12.5	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
24.11.2017	82.1	43.1	7.1	12.2	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
28.11.2017	81.5	43.7	7.3	12.4	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetri c Method as per CPCB method	18. 5182	IS: 5182 (Part-6)	IS: 5182 (Part-10)	Indophe nols Blue Method followed by CPCB	15. 5182	IS: 5182 (Part-22)				IS: 518) (Part-12

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

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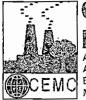


(GAZETTE No.1357, Di-03-08-2016) The result given above related to the tested sample, as The result given above related to the tested sample, as solved. The as This Test Report shall not be reproduced wholly or in participation mer asked for the above test only.

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Report no. - CEMC/TDPCL/021217/A5

Issued Date-02.12.2017

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02122017A5
Nature of Sampling	Ambient Air Sample
Sampling Location	Dosinga Village
Sampling By	Mr. Biswaranjan Behera
Sampling Date	01.11.2017 to 30.11.2017

Date	ΡM <sub>10</sub> (μg/m <sup>3</sup> )	РМ <sub>2.5</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m <sup>3</sup> )
05.11.2017	51.7	26.2	7.5	12.6	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
07.11.2017	48.5	24.7	7.3	12.2	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
10.11.2017	49.7	25.1	7.4	12.5	0.4	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
13.11.2017	52.5	26.6	7.1	12.1	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
18.11.2017	40.2	21.1	7.0	12.2	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
21.11.2017	51.3	26.3	7.3	12.5	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
24.11.2017	53.9	27.5	7.4	12.7	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
28.11.2017	52.4	26.7	7.1	12.3	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetri c Method as per CPCB method	IS: 5182		IS: 5182		IS: 5182	IS: 5182 (Part-22)			15: 5182 (Parts	IS: 5182 (Part- 12)

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

#### Dr.T. Sahu, PhD. Env. Sc. Authonized Siviato NALYST



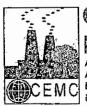
- Nuce ZETTE No. 1897, Dt-03-06-2016) > The result given above related to the tested sample, as received. The customer asked for the above test only.
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Report no. - CEMC/TDPCL/021217/A6

Issued Date-02,12,2017

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02122017A6
Nature of Sampling	Ambient Air Sample
Sampling Location	Bhitarkanika (Eco Sensitive)
Sampling By	Mr. Biswaranjan Behera
Sampling Date	01.11.2017 to 30.11.2017

Date	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	0,	Pb	Ni	As	Benzene	
	(µg/m³)	(µg/m³)	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	$(mg/m^3)$		$(\mu g/m^3)$		(ng/m³)	$(ng/m^3)$		$(ng/m^3)$
05.11.2017	47.5	24.8	6.5	10.1	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
07.11.2017	49.2	25.2	6.3	10.0	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
10.11.2017	46.4	23.7	6.4	10.2	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
13.11.2017	48.0	24.3	6.6	10.3	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
18.11.2017	35.7	19.1	6.4	10.2	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
21.11.2017	41.3	21.2	6.3	10.1	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
24.11.2017	46.7	24.3	6.1	10.0	0.1	<20	<10	< 0.06	<0.6	<0.44	<5	<1
28.11.2017	48.2	24.9	6.4	10.6	0.3	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
NAAQ Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetri c Method as per CPCB method	IS: 5182		IS: 5182 (Part-10)		IS: 5182				15: 5182 (Port	IS: 5182 (Part- 12)

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

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- Notesz ETTE MULTUST. Dt.03.06-2016) > The result given above related to the tested sample, as record. The partomer asked for the above test only.
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#### Report no. - CEMC/TDPCL/021217/N

#### Issued Date-02,12,2017

#### **NOISE LEVEL MONITORING REPORT**

Issued to	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Analysis No.	CEMC/TDPCL-D00N1
Nature of Sampling	Noise Sample
Sampling By	Mr. Biswaranjan Behera
Sampling Date	01.11.2017 to 30.11.2017

Date	Location	NL I	ay Time dI	NL Night Time dB (A)				
Date	Location	Max	Min.	Avg.	Max.	Min.	Avg.	
07.11.2017	Colony Area (R)	54.3	50.1	52.2	43.5	37.9	40.7	
13.11.2017	Kanakaprasad Village (R)	52.9	48.7	50.8	43.1	38.6	40.8	
18.11.2017	Near BMH (I)	72.4	66.8	69.6	69.2	61.3	65.2	
21.11.2017	Near Jetty (I)	71.6	69.1	70.3	68.9	66.7	67.8	
10.11.2017	Dosinga village (R)	53.9	48.6	51.2	42.8	37.3	40.0	
24.11.2017	Bhitarkanika (R)	51.8	46.7	49.2	40.2	37.5	38.8	

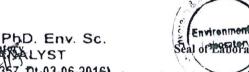
\*NL- Noise Level, I- Industrial, R- Residential

#### National Standard of Noise Level

Area	Catagory of August Tang	Permissible Limit in dB (A)				
Code	Category of Area/Zone           A         Industrial Area           B         Commercial Area           C         Residential Area	Day Time	Night Time			
А	Industrial Area	75	70			
В	Commercial Area	65	55			
С	Residential Area	55	45			
D	Silence Zone	50	40			

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still grventabove ferate for the tested sample, as received. The customer asked for the above test only.

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Report no. - CEMC/TDPCL/021217/W1

Issued Date-02.12.2017

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code

**Reference Number** 

: M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak

- : 4800026792, dtd-22.07.2017
- : Biswaranjan Bchera
- : 07.11.2017 & 21.11.2017
- : 08.11.2017 & 22.11.2017
- : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 15 KLD (Inlet-CEMC/17-18/390W &
- 403W)
- : CEMC-02122017(390&403)W

### STP INLET RESULT

SI.		Unit of	Rea	sult	Design as an entry for Prove
51. No.	Parameter	Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design parameter for Raw Sewage
1	Appearance		Turbid	Turbid	-
2	Colour		Blackish	Blackish	_
3	Odour		Foul	Foul	-
4	pH Value @ 25°C		6.58	6.81	6.0-8.5
5	Total Suspended Solids	mg/l	149.3	137.6	1000
6	B.O.D for 3 days @ 27°C	mg/l	180	190	300-350
7	Oil & Grease	mg/l	<5	<5	100
8	COD	mg/i	420	450	
9	Ammonical Nitrogen	mg/l	6.2	6.4	
10	Total Nitrogen	mg/l	35.4	36.9	
11	Faecal Coliform	MPN/100ml	1600	1600	

u. PhD. Env. Sc. ANALYST



A The result given above related to the tested sample, as received The customer asked for the above test only.

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Report no. - CEMC/TDPCL/021217/W2

Issued Date-02,12,2017

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by **Date of Sampling** Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code

**Reference Number** 

: M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak

- : 4800026792, dtd-22.07.2017
- : Biswaranjan Behera
- : 07.11.2017 & 21.11.2017
- : 08,11.2017 & 22.11.2017
- : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 15 KLD (Outlet-CEMC/17-18/391W &
- 404W)
- : CEMC-02122017(391&404)W

### STP OUTLET RESULT

SI.		Unit of	Res	ult	Standards for New STPs
No.	Parameter	Measurement	1 <sup>st</sup>	2 <sup>nd</sup>	Design after notification 2015
		Measurement	Fortnight	Fortnight	Design after normcation 2015
1	Appearance		Clear	Clear	-
2	Colour		Colorless	Colorless	-
3	Odour		Odourless	Odourless	-
4	pH Value @ 25°C		7.12	7.19	6.5-9.0
5	Total Suspended Solids	mg/l	17.8	18.5	<20
6	B.O.D for 3 days @ 27°C	mg/l	9.1	8.6	<10
_7	Oil & Grease	mg/l	<5	<5	
8	COD	mg/l	40	44	<50
9	Ammonical Nitrogen	mg/l	1.3	1.9	<5
10	Total Nitrogen	mg/l	9.2	9.7	<10
11	Faecal Coliform	MPN/100ml	47	47	<100

hu-PhD. Env. Sc. Autholized OVE ANALYST Notes



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Report no. - CEMC/TDPCL/021217/W3

Issued Date-02.12.2017

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by **Date of Sampling Date of Receiving** Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code

#### **Reference Number**

: M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak

- : 4800026792, dtd-22.07.2017
- : Biswaranjan Behera
- : 07.11.2017 & 21.11.2017
- : 08.11.2017 & 22.11.2017
- : APHA 23rd Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 140 KLD (Inlet-CEMC/17-18/392W &
- 405W)
- : CEMC-02122017(392&405)W

<u></u>		Unit of	Res	sult	Design parameter for Raw	
SI.	Parameter	0.000 01	1 <sup>st</sup>	2 <sup>nd</sup>	Sewage	
No.		Measurement	Fortnight	Fortnight	Jewage	
1	Appearance		Turbid	Turbid	-	
2	Colour		Blackish	Blackish	-	
3	Odour		Foul	Foul	-	
4	pH Value @ 25°C		6.92	6.84	6.0-8.5	
5	Total Suspended Solids	mg/l	159.6	167.2	1000	
6	B.O.D for 3 days @ 27°C	mg/l	220	230	300-350	
7	Oil & Grease	mg/l	7.1	7.3	100	
8	COD	mg/l	860	900		
9	Ammonical Nitrogen	mg/l	7.9	8.5		
10	Total Nitrogen	mg/l	41.6	45.3		
11	Faecal Coliform	MPN/100ml	>1600	>1600		

STP INLET RESULT

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Fille Night Bive Databased to the tested sample, as received. The customer asked for the above test only.
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Report no. - CEMC/TDPCL/021217/W4

Issued Date-02.12.2017

### STP REPORT

Name & Address of the Customer

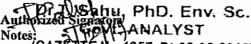
Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code

#### **Reference Number**

- : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
- : 4800026792, dtd-22.07.2017
- : Biswaranjan Behera
- : 07.11.2017 & 21.11.2017
- : 08.11.2017 & 22.11.2017
- : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 140 KLD (Outlet-CEMC/17-18/393W &
- 406W)
- : CEMC-02122017(393&406)W

### STP OUTLET RESULT

SI.		Unit of	Res	sult	Standards Gra New STD-
No.	Parameter	Measurement	l <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Standards for New STPs Design after notification 2015
1	Appearance		Clear	Clear	-
2	Colour		Colorless	Colorless	-
3	Odour		Odourless	Odourless	-
4	pH Value @ 25°C		7.09	7.18	6.5-9.0
5	Total Suspended Solids	mg/l	17.7	16.8	<20
6	B.O.D for 3 days @ 27°C	mg/l	8.8	9.2	<10
7	Oil & Grease	mg/l	<5	<5	
8	COD	mg/l	34	42	<50
_9 _	Ammonical Nitrogen	mg/l	2.1	2.7	<5
10	Total Nitrogen	mg/l	6.9	7.2	<10
11	Faecal Coliform	MPN/100ml	35	35	<100





AGAZE NEE Novel 3500 De 10 Balo 12016 lested sample, as received. The customer asked for the above test only.

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Report no. - CEMC/TDPCL/021217/W

Issued Date-02.12.2017

### SEA WATER ANALYSIS REPORT

Name & Address of the Customer

Work order No. Date of Sampling Sampling by Sample Description

EMC

- : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
- : 4800026792, dtd-22.07.2017
- : 25.11.2017
- : Bikash Samantaray & Biswaranjan Behera
- : Sea Water

	STATION DESCRIPTION										
SL. NO.	STATION	Sample Location	GPS COORDINATES								
01	STATION-1	Dhamra river mouth	20°47'04.16" N 86°57'31.47" E								
02	STATION-2	Dry bulk cargo birth face	20°48'55.29" N 86°58'08.38" E								
03	STATION-3	Liquid/Gas cargo birth face	20°50'25.10" N 86°58'24.40" E								
04	STATION-4	Along channel at 4 km	20°50'54.72" N 86°59'17.10" E								
05	STATION-5	Along channel at 8 km	20°52'05.86" N 87°01'21.46" E								
06	STATION-6	Along channel at 12 km	20°53'13.22 N 87°03'09.05" E								
07	STATION-7	Dragging dumping site inside sea	20°50'02.46" N 86°58'21.61" E								
08	STATION-8	Near Kanika Island	20°49'39.70" N 86°59'01.88" E								

Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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Report no. - CEMC/TDPCL/021217/W

Issued Date-02.12.2017

### SEA WATER ANALYSIS REPORT

			W	ATER ANALYSIS	DATA				
Locatio	ns	Temp. (°C)	Turbidity (NTU)	Conductivity (µS/cm)	рH	Salinity (ppt)	DO (mg/l)	BOD (mg/l)	COD (mg/l)
Station-1	SW	26	23	9520	7.6	17.42	7.2	2.4	32
Station-1	BW	24	24	9770	7.8	20.16	6.6	< 3	24
Station-2	SW	27	19	12540	7.7	19.74	6.8	2.8	28
Station-2	BW	23	21	12640	8.0	23.45	6.5	< 3	22
Station-3	SW	26	20	12180	7.8	23.03	7.1	2.8	26
	BW	24	25	12330	8.0	26.17	6.6	< 3	24
Station-4	SW	26	18	12830	8.0	24.33	7.2	2.4	24
Station-4	BW	23	22	13580	8.0	27.11	6.6	< 3	22
Station-5	SW	25	16	13370	8.0	25.38	7.4	3.6	24
Station-5	BW	22	21	13560	8.1	28.24	6.8	< 3	20
Station-6	SW	25	18	13740	8.2	25.72	7.2	3.2	32
Station-0	BW	21	23	14230	8.0	29.08	6.4	< 3	28
Station 7	SW	25	19	11750	8.1	27.19	7.2	2.4	28
Station-7	BW	21	24	12700	8.0	28.67	6.3	< 3	24
Station-8	SW	26	21	9640	8.0	24.12	7.0	3.6	36
Station-8	BW	22	29	9810	8.0	26.56	6.2	< 3	28

\*SW= Surface Water, BW= Bottom Water

			Ň	VATER ANA	LYSIS DATA				
Locatio	115	Copper (mg/l)	Cadmium (mg/l)	Mercury (mg/l)	Phosphate (mg/l)	Sulphate (mg/l)	Nitrite (mg/l)	Nitrate (mg/l)	TSS (mg/l)
Station 1	SW	< 0.05	< 0.01	< 0.001	< 0.05	1272	0.18	8.4	176.2
Station-1	BW	< 0.05	< 0.01	< 0.001	< 0.05	1354	0.31	10.6	189.7
Station-2	SW	< 0.05	< 0.01	< 0.001	< 0.05	1460	0.11	7.2	152.3
Station-2	BW	< 0.05	< 0.01	< 0.001	< 0.05	1520	0.27	9.8	163.1
Station-3	SW	< 0.05	< 0.01	< 0.001	< 0.05	1610	0.13	9.1	176.4
Station-J	BW	< 0.05	< 0.01	< 0.001	< 0.05	1770	0.26	11.2	182.8
Station-4	SW	< 0.05	< 0.01	< 0.001	< 0.05	1640	0.09	8.3	201.4
Station-4	BW	< 0.05	< 0.01	< 0.001	< 0.05	1820	0.28	10.4	221.7
Station-5	SW	< 0.05	< 0.01	< 0.001	< 0.05	1710	0.12	7.4	182.6
Station-5	BW	< 0.05	< 0.01	< 0.001	< 0.05	1890	0.22	8.9	194.8
Station-6	SW	< 0.05	< 0.01	< 0.001	< 0.05	1740	0.13	6.9	201.5
Station-0	BW	< 0.05	< 0.01	< 0.001	< 0.05	1920	0.28	9.1	215.7
Station 7	SW	< 0.05	< 0.01	< 0.001	< 0.05	1730	0.09	7.2	188.4
Station-7	BW	< 0.05	< 0.01	< 0.001	< 0.05	1910	0.22	10.6	204.3
Station-8	SW	< 0.05	< 0.01	< 0.001	< 0.05	1610	0.14	8.6	192.7
Station-6	BW	< 0.05	< 0.01	< 0.001	< 0.05	1780	0.38	11.9	211.6

\*SW= Surface Water, BW= Bottom Water

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SEA WATER ANALYSIS REPORT

### Report no. - CEMC/TDPCL/021217/W

Issued Date-02.12.2017

				ATER ANALY			
Locatio	ns	Calcium Hardness (mg/l)	Magnesium Hardness (mg/l)	Total Hardness (mg/l)	ess Solids (mg/l)		Total Nitrogen (mg/l)
Casting 1	SW	320.6	111.8	1260	7616	ND	10.3
Station-1	BW	440.9	121.5	1600	7814	ND	13.8
Station 2	SW	761.5	189.5	2680	10032	ND	11.2
Station-2 -	BW	961.9	192.0	3190	10112	ND	14.6
SV SV	SW	440.9	106.9	1540	9744	ND	11.7
Station-3	BW	521	126.4	1820	9864	ND	14.9
Charling (	SW	761.5	148.2	2510	10262	ND	12.1
Station-4	BW	884.7	194.4	3060	10864	ND	15.6
	SW	841.7	150.7	2720	10696	ND	12.3
Station-5	BW	961.9	204.1	3240	10848	ND	16.2
Station 6	SW	901.8	148.2	2860	10992	ND	11.9
Station-6	BW	1002	204.1	3340	11384	ND	13.8
St-1, 7	SW	521	133.7	1850	9400	ND	12.2
Station-7	BW	601.2	165.2	2180	10160	ND	14.1
	SW	360.7	119.1	1390	7712	ND	10.6
Station-8	BW	400.8	123.9	1510	7848	ND	13.9

\*SW= Surface Water, BW= Bottom Water

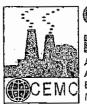
			WATEI	R ANALYSIS DAT	'A		
Locations		Total Chromium (mg/l)	Phenolic Compounds (mg/l)	Hexavalent Chromium (mg/l)	Petroleum Hydrocarbon (mg/l)	Chlorinity (°/ <sub>00</sub> )	Oil and Grease (mg/l)
Station 1	SW	< 0.05	< 0.001	< 0.05	0.05	9.5	2.4
Station-1	BW	< 0.05	< 0.001	< 0.05	ND	10.1	ND
Ct-41- 2	SW	< 0.05	< 0.001	< 0.05	0.8	12.5	3.7
Station-2	BW	< 0.05	< 0.001	< 0.05	ND	12.8	ND
Castle 2	SW	< 0.05	< 0.001	< 0.05	0.6	. 11.6	7.3
Station-3	BW	< 0.05	< 0.001	< 0.05	ND	13.4	ND
Offician d	SW	< 0.05	< 0.001	< 0.05	1.0	11.9	4.9
Station-4	BW	< 0.05	< 0.001	< 0.05	ND	14.2	ND
Ctation 5	SW	< 0.05	< 0.001	< 0.05	0.9	12.1	4.1
Station-5	BW	< 0.05	< 0.001	< 0.05	ND	14.2	ND
	SW	< 0.05	< 0.001	< 0.05	1.1	10.6	7.4
Station-6	BW	< 0.05	< 0.001	< 0.05	ND	12.9	ND
Qual - 7	SW	< 0.05	< 0.001	< 0.05	0.8	11.26	4.3
Station-7	BW	< 0.05	< 0.001	< 0.05	ND	13.04	ND
C+-+1 0	SW	< 0.05	< 0.001	< 0.05	1.1	12.97	6.9
Station-8	BW	< 0.05	< 0.001	< 0.05	ND	13.28	ND

### \*SW= Surface Water, BW= Bottom Water

GAZETON WORLD'ST (GAZETON WORLD'ST, DE-03-06-2016)

Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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Report no. - CEMC/TDPCL/021217/W

Issued Date-02.12.2017

### SEA WATER ANALYSIS REPORT

			PHYTO	PLANKTON M	ONITORING DATA
Locatio	ons	Total Count/L	No. of Species	Chlorophyll- a (µg/L)	Major Species
Station-	sw	1076	18	0.7234	C. pentagonum, N.longisigma, C.furca, Bacillaria, Podosira,
1	BW	794	12	0.3196	Pleurosigma, N.longisigma, Podosira
Station-	SW	2156	23	1.2012	C. pentagonu, Bacillaria, Podosira, Skeletonema,
2	BW	1107	13	0.9845	Podosira, C.pentagonum, Bacillaria
Station-	SW	3429	21	1.4791	C. pentagonum, N.striata, C.furca, Ceratium
3	BW	1016	11	1.0046	C.pentagonum, N.striata, C.furca
Station-	SW	2652	16	1.9845	C. pentagonum, Chaetocerous, Bacillaria, N.striata
4	BW	1398	10	1.0016	Bacillaria, Chaetocerous, Ceratium
Station-	SW	1924	18	1.8761	Bacillaria, Chaetocerous, Podosira
5	BW	1073	09	1.0008	C.pentagonum, Chaetocerous, Bacillaria
Station-	SW	2072	21	0.9945	Podosira , Bacillaria
6	BW	1341	11	0.8102	C.pentagonu, Bacillaria, Podosira
Station-	SW	2264	15	0.9846	C.pentagonum, Pleurosigma, N.longisigma,
7	BW	1397	09	0.7108	Pleurosigma, C.pentagonum,
Station	SW	2410	18	2.0194	Pleurosigma, N.longisigma, C.pentagonum
Station- 8	BW	1656	13	1.4216	C.pentagomum, Skeletonema, N.longisigma, C.furca, Bacillaria

\*SW= Surface Water, BW= Bottom Water.

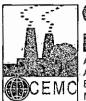
		ZO	OPLANKTO	N MONITORING DATA
Locatio	ns Total No. of Count/L Species			Major Species
Station-1	SW	1053	15	Rotifera, Protoza, Nematoda, Crustacean Larvae
Station-1	BW	864	- 09	Rotifera, Protoza, Nematoda
Station 2	SW	1120	12	Anostraca, Cladocera, Nematoda
Station-2	BW	980	11	Protozoa, Nematoda, Rotifera
St. SV		1570	19	Protozoa, Rotifera, Copepod
Station-3	BW	1160	13	Anostraca, Cladocera,
Station-4	SW	1580	17	Cladocera, Nematoda
Station-4	BW	1025	10	Ostracoda, Protozoa, Copepod, Rotifera
Station 5	SW	1310	13	Crustacean Larvae, Protozoa, Nematoda
Station-5	BW	1028	10	Crustacean Larvae, Protozoa, Nematoda
Ctation (	SW	1240	II	Ostracoda, Protozoa, Copepod, Rotifera
Station-6	BW	980	08	Cladocera, Nematoda
Station-7	SW	1175	11	Copepod, Rotifera
Station-/	BW	890	07	Copepod, Rotifera
Station 9	SW	1075	08	Protozoa, Rotifera, Nematoda
Station-8	BW	860	12	Protozoa, Rotifera, Nematoda

\*SW= Surface Water, BW= Bottom Water

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Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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Report no. - CEMC/TDPCL/021217/W

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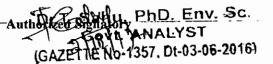
### SEA WATER ANALYSIS REPORT

·		MICROBIOLO	GICAL MONITORING D	ATA	
Locatio	ons	Total Bacterial Count (CFU/ml)	Total Coliform (CFU/ml)	Faecal Coliform (CFU/ml)	E.coli (CFU/ml)
Station-	SW	310	35	5.2	ND
<u> </u>	BW	410	47	6.1	ND
Station-	SW	160	25	3.4	ND
2	BW	180	31	3.9	ND
Station-	SW	210	47	3.9	ND
3	BW	420	76	4.1	ND
Station-	SW	190	47	3.2	ND
4	BW	220	61	3.9	ND
Station-	SW	160	35	2.3	ND
5	BW	250	47	3.1	ND
Station-	SW	140	19	2.1	ND
6	BW	230	35	2.9	ND
Station-	SW	170	19	1.6	ND
7	BW	210	28	2.3	ND
Station-	SW	290	35	3.2	ND
8	BW	330	47	3.9	ND

\*SW= Surface Water, BW= Bottom Water

		MICROBIOLOGIC	AL MONITORING D	ATA	
Locatio	ns	Enterococcus (CFU/ml)	Salmonella (CFU/ml)	Shigella (CFU/ml)	Vibrio (CFU/ml)
Station-1	SW	ND	ND	ND	ND
Station-1	BW	ND	ND	ND	ND
Station 2	SW	ND	ND	ND	ND
Station-2	BW	ND	ND	ND	ND
Etation 2	SW	ND	ND	ND	ND
Station-3	BW	ND	ND	ND	ND
Station 4	SW	ND	ND	ND	ND
Station-4	BW	ND	ND	ND	ND
Station-5	SW	ND	ND	ND	ND
Station-5	BW	ND	ND	ND	ND
Station (	SW	ND	ND	ND	ND
Station-6	BW	ND	ND	ND	ND
Ctation 7	SW	ND	ND	ND	ND
Station-7	BW	ND	ND	ND	ND
Ctation 0	SW	ND	ND	ND	ND
Station-8	BW	ND	ND	ND	ND

\*SW= Surface Water, BW= Bottom Water





Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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Report no. - CEMC/TDPCL/021217/W

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Issued Date-02.12.2017

### SEA WATER ANALYSIS REPORT

		PRODUCTIVITY MONITORING D	A1A
Locations		Gross Primary Productivity (mgC/ L/ day)	Net Primary Productivity (mgC/ L/ day)
Station-1	ŚW	2.4	1.2
Station-1	BW	1.7	1.5
Station-2	SW	1.6	1.4
Station-2	BW	2.3	1.6
Station-3	SW	1.7	1.2
Station-J	BW	1.3	1.1
Station-4	SW	2.5	1.6
Station-4	BW	1.7	1.6
Station-5	SW	1.5	1.6
	BW	2.3	1.3
Station-6	SW	2.5	1.5
	BW	1.7	1.2
Station-7	SW	2.1	1.2
	BW	2.1	1.6
Station-8	SW	1.5	1.2
Station-0	BW	2.4	1.8

\*SW= Surface Water, BW= Bottom Water

Locatio	ns	Fungus (CFU/1 g dry wt.)	Total Count/ 50g wet sediment			Major Species	
Station 1	SW	1240	190	7	Index 0.1953	N.longsigma	
Station-1	BW	1527	241	9	0.4716	Podosira	
Station-2	SW	3789	214	11	0.4565	Podosira ·	
Station-2	BW	4056	341	15	0.5132	Podosira, Ditylum	
Station-3	SW	2567	490	8	0.7691	Podosira, N.longsigma	
	BW	2973	512	4	0.9153	Dityhum	
Station-4	SW	1937	621	6	0.5134	Podosira	
	BW	2146	325	7	0.4281	Ditylum	
	SW	1846	276	3	0.5234	Podosira	
Station-5	BW	1638	184	2	0.7643	Podosira, N.longsigma, Ditylum	
Station-6	SW	3951	195	5	0.4682	Podosira	
Station-0	BW	3281	152	3	0.4816	Podosira, N.longsigma	
Station-7	sw	2940	276	6	0.7342	Podosira, N.longsigma, Ditylum	
Station-7	BW	2246	214	3	0.9527	Podosira, N.longsigma, Ditylum	
Station-8	SW	1320	416	5	0.7682	Podosira, N.longsigma	
Station-8	BW	1143	287	W. S. Mary	0.5341	Podosira	

\*SW= Surface Water, BW= Bottom Water

C. Palut PhD. Env. Sc.

Seal of Laboratory

(CAZETTE No-1357, Dt-03-06-2016)

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Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlifé Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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### Report no. - CEMC/TDPCL/021217/W

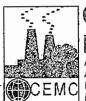
Issued Date-02. 12.2017

### SEA WATER ANALYSIS REPORT

Locati	ons	Name of Phylum, Class and Number of individuals encountered	Total number of species Encountered	Total Fauna per m
	sw	1.Phylum- Arthropoda Class- Malagostraca-40 2.Phylum- Annelida Class Dalyabata 16	08	59
Station-1	вw	Class-Polychaeta-16 1.Phylum- Arthropoda Class- Malagostraca-52 2.Phylum- Annelida Class-Polychaeta-21	11	62
Station 0	sw	1.Phylum-Annelida Class-Polchaeta-16 2.Phylum-Arthropda Class- Copepoda-3	21	214
Station-2	BW	1.Phylum-Annelida Class-Polchaeta-17 2.Phylum-Arthropda Class- Copepoda-9	13	174
	sw	1.Phylum- Arthropoda Class- Malagostraca-22 2.Phylum- Annelida Class-Polychaeta-24 3.Phylum- Mollusca Class-Gastropoda-12 Class- Pelecypoda-7	54	264
Station-3	BW	1.Phylum- Arthropoda Class- Malagostraca-45 2.Phylum- Annelida Class-Polychaeta-12 3.Phylum- Mollusca Class-Gastropoda-56 Class- Pelecypoda-7	39	213
Station 4	sw	I.Phylum- Annelida Class-Polychaeta-41 2.Phylum-Mollusca Class-Gastropoda-3 Class-Pelecypoda-4 Class-Bivalvia-3	17	367
Station-4	вw	1.Phylum- Annelida Class-Polychaeta-21 2.Phylum-Mollusca Class-Gastropoda-19 Class-Pelecypoda-10 Class-Bivalvia-9	12	291
Station-5	sw	1.Phylum-Anthropoda Class-Amphipoda-10 2.Phylum-Annelida Class-Polychaeta-14	21	712

Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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and a second	na seuter tenten an Bruile, e print te res	3.Phylum- Mollusca	ana itama amanya panja dangani na kati yang dan na mananya atama na mananya na ma	an fear an ann an 1887 an 1997 ann an 1997 an 1		
		Class- Pelecypoda-15				
		Class- Bivalvia-21				
		Class- Gastropoda-3				
		1.Phylum- Anthropoda				
		Class- Amphipoda-19				
		2.Phylum- Annelida				
		Class- Polychaeta- 11				
	BW	3.Phylum- Mollusca	27	521		
		Class- Pelecypoda-8				
		Class- Bivalvia-11				
		Class- Gastropoda-11				
		1.Phylum- Annelida				
	011/	Class- Polychaeta-29	67	492		
	SW	2.Phylum- Mollusca	57			
Station 6		Class- Bivalvia-4				
Station-6		1.Phylum- Annelida				
	DW	Class-Polychaeta-31	20	024		
	BW	2.Phylum- Mollusca	39	234		
		Class- Bivalvia-6				
		1.Phylum-Annelida				
		Class- Polychaeta-19				
	sw	2.Phylum- Mollusca	67	512		
	SW	Class- Gastropoda-5	07	512		
		Class-Bivalvia-4				
Station-7		Class- Scaphopoda-12				
Station-7		1.Phylum-Annelida				
		Class- Polychaeta-12				
	вw	2.Phylum- Mollusca	51	388		
	DW	Class- Gastropoda-11	51	200		
		Class-Bivalvia-3				
		Class- Scaphopoda-4				
	sw	1.Phylum- Annelida	23	411		
Station-8	3W	Class-Polychaeta-21	23	411		
Station-o	BW	1.Phylum- Annelida	14	293		
	BW	Class- Polychaeta-20	14	293		

\*SW= Surface Water, BW= Bottom Water

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Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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Report no. - CEMC/TDPCL/021217/S

SEDIMENT ANALYSIS REPORT

Name & Address of the Customer

Work order No. Date of Sampling Sampling by **Sample Description**  : M/s. The Dhamra Port Company Ltd., Dosinga,

Issued Date-02, 12, 2017

Zinc mg/kg) < 3 < 3 < 3 < 3 < 3 < 3 < 3 < 3

Bhadrak

- : 4800026792, dtd-22.07.2017
- : 25.11.2017

SEA SEDIMENT ANALYSIS REPORT

- : Bikash Samantaray & Biswaranjan Behera
- : Sediment

			SEA SEDIMEN	IANALISISI					
			SEDIMENT	ANALYSIS D	ATA				
Lesstings	TT	Organic	Moisture Content	Conductivity	Iron	Sodium	Copper	Nickel	
Locations	pН	Matter	(%)	(µS/cm)	(%)	(%)	(mg/kg)	(mg/Kg)	(r
Station-1	7.1	4.1	7.2	3.8	2.9	9.51	< 5	< 1	
Station-2	6.8	2.9	6.7	4.9	2.4	13.42	< 5	< 1	
Station-3	6.5	3.2	7.1	6.2	2.1	19.73	< 5	< 1	
Station-4	6.9	2.8	6.9	6.7	3.5	17.91	< 5	<1	
Station-5	6.7	3.1	6.4	6.2	3.8	21.34	< 5	< 1	
Station-6	7.0	2.9	7.2	6.6	2.1	23.87	< 5	< 1	
Station-7	7.2	3.0	6.3	5.9	3.2	16.52	< 5	< 1	
Station-8	7.0	3.7	7.3	4.1	2.6	10.16	< 5	< 1	

	SEDIMENT ANALYSIS DATA									
Tanting	Manganese	Lead	Boron	Phosphate	Chloride	Sulphate	Sulphide	Pesticide	Potassium	
Locations	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Station-1	< 1	< 5	< 0.5	< 0.5	212.2	789.2	ND	ND	0.84	
Station-2	< 1	< 5	< 0.5	< 0.5	425.7	1412.6	ND	ND	0.91	
Station-3	< 1	< 5	< 0.5	< 0.5	397.8	1627.3	ND	ND	0.89	
Station-4	< 1	< 5	< 0.5	< 0.5	523.9	1732.8	ND	ND	0.96	
Station-5	< 1	< 5	< 0.5	< 0.5	475.6	1911.1	ND	ND	0.48	
Station-6	< 1	< 5	< 0.5	< 0.5	628.7	2062.5	ND	ND	0.66	
Station-7	< 1	< 5	< 0.5	< 0.5	411.6	1576.4	ND	ND	0.86	
Station-8	< 1	< 5	< 0.5	< 0.5	254.8	928.7	ND	ND	0.75	

	SEDIMENT ANALYSIS DATA												
	Total Petroleum Chromiu Hydrocarb		Aluminiu	Total Nitroge	Organic	Phosphoro	Texture (%)						
Locations	m (mg/kg)	on (mg/kg)	m (mg/kg)	n (mg/kg)	Nitrogen (mg/kg)	us (mg/kg)	Sand	Silt	Clay				
Station-1	< 1	02	< 0.1	6.1	2.7	2,6	9.73	21.9	68.37				
Station-2	< 1	04	< 0.1	3.2	1.9	1.9	0.51	23.8	75.69				
Station-3	<1	05	< 0.1	2.9	2.2	1.7	0.49	28.6	70.91				
Station-4	< 1	01	< 0.1	2.5	1.3	1.8	0.32	19.4	80.28				
Station-5	< 1	ND	< 0.1	2.4	1.0	1.6	0.44	25.7	73.86				
Station-6	< 1	ND	< 0.1	2.1	0.9	1.6	0.51	37.8	61.69				
Station-7	< 1	ND	< 0.1	3.2	1.2	: ; : 1.4	0.62	23.9	75,48				
Station-8	<1	02	< 0.1	6.2	1.8	2.1	0.47	_41.2	58.33				

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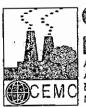
### SEA SEDIMENT ANALYSIS REPORT

PHYTOBENTHOS MONITORING DATA											
Locations	Fungus (CFU/1 g dry wt.)	Total Count/ 50g wet sediment	No. of Species	Diversity Index	Major Species						
Station-1	628	98	6	0.5894	Podosira, N.longsigma						
Station-2	972	415	4	0.5485	N.longsigma, Ditylum						
Station-3	1176	612	5	0.4862	Podosira, Ditylum						
Station-4	1891	518	5	0.4218	Podosira, N.longsigma, Ditylum						
Station-5	1965	387	9	0.9655	Podosira						
Station-6	1754	475	6	0.4841	Podosira, N.longsigma						
Station-7	1715	733	5	1,5147	Podosira, N.longsigma						
Station-8	922	910	6	1.2214	Podosira, Ditylum						

	TOTAL FAUNA MONIT	ORING DATA	
Locations	Name of Phylum, Class and Number of individuals encountered	Total number of species Encountered	Total Fauna per m <sup>3</sup>
Station-1	1.Phylum- Arthropoda Class- Malagostraca-24 2.Phylum- Annelida Class-Polychaeta-27	11	74
Station-2	1.Phylum-Annelida Class-Polchaeta-19 2.Phylum-Arthropda Class- Copepoda-5	29	131
Station-3	1.Phylum- Arthropoda Class- Malagostraca-18 2.Phylum- Annelida Class-Polychaeta-13 3.Phylum- Mollusca Class-Gastropoda-9 Class- Pelecypoda-5	64	1275
Station-4	1.Phylum-Annelida Class-Polychaeta-11 2.Phylum-Mollusca Class-Gastropoda-14 Class-Pelecypoda-2 Class-Bivalvia-12		425
Station-5	1. Phylum- Anthropoda Class- Amphipoda-17 2. Phylum- Annelida Class- Polychaeta-10 1. Phylum- Mollusca Class- Pelecypoda-9 Class- Bivalvia-12 Class- Gastropoda-2	61	988

Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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Station-6	1.Phylum- Annelida Class- Polychaeta-11 2.Phylum- Mollusca Class- Bivalvia-10	82 ·	1410
Station-7	1.Phylum-Annelida Class- Polychaeta-21 2.Phylum- Mollusca Class- Gastropoda-14 Class-Bivalvia-5 Class- Scaphopoda-7	41	832
Station-8	1.Phylum- Annelida Class- Polychaeta-21	51	1560

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Report no. - CEMC/TDPCL/020118/A1

Issued Date-02.01.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02012018A1
Nature of Sampling	Ambient Air Sample
Sampling Location	Colony Area
Sampling By	Mr. Biswaranjan Behera
Sampling Duration	01.12.2017 to 31.12.2017

, ,	Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	$SO_2$ (µg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (µg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m³)	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m <sup>3</sup> )
`	02.12.2017	54.6	28.1	6.8	12.7	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
~	05.12.2017	51.3	26.3	7.0	12.5	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
	08.12.2017	32.5	17.5	7.2	12.7	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	11.12.2017	44.8	23.6	7.3	12.6	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
$\sim$	14.12.2017	51.5	26.9	6.9	12.4	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	18.12.2017	56.7	28.9	6.8	12.5	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
	21.12.2017	57.2	29.2	7.1	12.7	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
	26.12.2017	55.4	28.3	6.9	12.4	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
· .	NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
	Methods of Analysis	IS: 5182 (Part- 23)		101 2102	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-9)	IS: 5182 (Part- 22)		As per CPCB method followed by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

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

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Report no. - CEMC/TDPCL/020118/A2

Issued Date-02.01.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02012018A2
Nature of Sampling	Ambient Air Sample
Sampling Location	Kanakaprasad Village
Sampling By	Mr. Biswaranjan Behera
Sampling Duration	01.12.2017 to 31.12.2017

Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m³)	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m <sup>3</sup>
												)
02.12.2017	52.8	27.2	7.3	12.3	0.3	<20	<10	<0.06	<0.6	< 0.44	<5	<1
05.12.2017	50.4	25.9	7.1	12.1	0.4	<20	<10	<0.06	<0.6	< 0.44	<5	<1
08.12.2017	28.3	15.7	6.9	12.0	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
11.12.2017	39.5	20.4	7.0	12.3	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
14.12.2017	45.7	23.9	7.3	12.3	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<t ,<="" td=""></t>
18.12.2017	48.0	24.3	7.2	12.0	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
21.12.2017	55.2	28.1	6.9	12.1	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
26.12.2017	54.3	27.8	7.2	12.2	0.4	<20	<10	<0.06	<0.6	< 0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)		IS: 5182	1	IS: 5182 (Part-10)		IS: 5182 (Part-9)		method	As per CPCB method followe d by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

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

Dr.T. Sahr, BHD\_Epv. Sc. Automoteda



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Report no. - CEMC/TDPCL/020118/A3

Issued Date-02.01.2018

### **AMBIENT AIR QUALITY MONITORING TEST REPORT**

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02012018A3
Nature of Sampling	Ambient Air Sample
Sampling Location	Near BMH
Sampling By	Mr. Biswaranjan Behera
Sampling Duration	01.12.2017 to 31.12.2017

.	Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	РМ <sub>2.5</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m³)	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m <sup>3</sup> )
ا- <sub>ا</sub>	02.12.2017	54.5	28.1	7.5	12.8	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
Ì	05.12.2017	56.7	29.3	7.3	12.5	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	08.12.2017	29.8	15.9	7.0	12.7	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
1	11.12.2017	39.7	21.1	7.4	12.4	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	14.12.2017	49.2	25.4	7.5	12.8	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
	18.12.2017	52.9	27.2	7.3	12.6	0.4	<20	<10	<0.06	<0.6	<0.44	.<5	<1
	21.12.2017	54.0	27.8	7.5	12.4	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
	26.12.2017	55.3	28.3	7.4	12.5	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
	NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
,4		1S: 5182 (Part-23)		IS: 5182	IS: 5182 (Part-6)	IS: 5182	followed by	IS: 5182	IS: 5182 (Part-22)	followe d by	followe d by	IS: 5182 (Part-11)	1S: 5182 (Part- 12)
			methoo				CPCB			AAS	AAS		

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



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Report no. - CEMC/TDPCL/020118/A4

Issued Date-02.01.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02012018A4
Nature of Sampling	Ambient Air Sample
Sampling Location	Near Jetty
Sampling By	Mr. Biswaranjan Behera
Sampling Duration	01.12.2017 to 31.12.2017

Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO <sub>2</sub> (µg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m³)	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup>	Benzene (µg/m³)	
02.12.2017	83.1	41.2	7.8	13.2	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
05.12.2017	81.5	40.1	7.6	13.0	0.5	<20	<10	< 0.06	<0.6	<0.44	<5	<1
08.12.2017	41.6	21.4	7.5	12.9	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
11.12.2017	75.3	38.9	7.7	12.6	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
14.12.2017	81.0	40.3	7.3	13.0	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
18.12.2017	82.4	41.3	7.5	13.1	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
21.12.2017	83.6	42.5	7.8	13.3	0.4	<20	<10	<0.06	<0.6	< 0.44	<5	<1
26.12.2017	83.2	42.1	7.7	13.2	0.5	<20	<10	<0.06	<0.6	< 0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetri c Method as per CPCB method		IS: 5182 (Part-6)	IS: 5182 (Part-10)	Indophe nois Blue Method followed by CPCB	15. 5197	IS: 5182 (Part-22)	As per CPCB method followe d by AAS	As per CPCB metho d followe d by AAS		IS: 518 (Part- 12)

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

### Dr.T. SahunPhD. Env. Sc. AuthGroven Standary ST (GANERIE No.18\$7, Dt-03-06-2016)

Manager canof Laborator

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#### Report no. - CEMC/TDPCL/020118/A5

#### Issued Date-02.01.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak				
Work Order No.	4800026792, dtd-22.07.2017			
Reference No.	CEMC-02012018A5			
Nature of Sampling	Ambient Air Sample			
Sampling Location	Dosinga Village			
Sampling By	Mr. Biswaranjan Behera			
Sampling Duration	01.12.2017 to 31.12.2017			

Date	PM <sub>10</sub>	PM2.5	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	03	Pb	Ni	As	Benzene	BaP
Date	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(mg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m³)	(µg/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(ng/m
02.12.2017	52.5	26.9	7.8	13.1	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
05.12.2017	49.4	25.4	7.9	12.8	0.5	<20	<10	<0.06	<0.6	< 0.44	<5	<1
08.12.2017	32.8	17.3	7.5	12.6	0.3	<20	<10	<0.06	<0.6	< 0.44	<5	<1
11.12.2017	40.5	21.7	7.2	12.9	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
14.12.2017	48.7	25.1	7.5	11.9	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
18.12.2017	55.8	28.5	7.7	13.0	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
21.12.2017	57.4	29.3	7.3	12.6	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
26.12.2017	56.5	28.9	7.5	12.8	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part <del>.</del> 23)	Gravimetri c Method as per CPCB method	IS: 5182			Indophe nols Blue Method followed by CPCB	IS: 5182	1			IS: 5182 (Part- 11)	IS: 518 (Part- 12)

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

BhD, Env. Sc.  $D_{T}$ 

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TIE NO 1857 Dt-03-06-2016) The result given above related to the tested sample, as

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### Report no. - CEMC/TDPCL/020118/A6

#### Issued Date-02.01.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02012018A6
Nature of Sampling	Ambient Air Sample
Sampling Location	Bhitarkanika (Eco Sensitive)
Sampling By	Mr. Biswaranjan Behera
Sampling Duration	01.12.2017 to 31.12.2017

Date	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	0,	Pb	Ni	As	Benzene	BaP
Date	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m³)	(μg/m <sup>3</sup> )	$(mg/m^3)$	$(\mu g/m^3)$	(µg/m³)	(µg/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(µg/m³)	(ng/m <sup>3</sup>
02.12.2017	47.5	24.5	7.1	11.2	0.2	<20	<10	<0.06	<0.6	< 0.44	<5	<1
05.12.2017	43.8	23.1	6.9	10.4	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
08.12.2017	25.4	13.9	6.7	10.7	0.2	<20	<10	<0.06	<0.6	< 0.44	<5	<1
11.12.2017	32.7	17.2	6.7	10.9	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
14.12.2017	41.0	21.1	6.5	9.9	0.3	<20	<10	<0.06	<0.6	< 0.44	<5	<1
18.12.2017	45.2	23.8	7.0	9.8	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
21.12.2017	46.5	24.3	7.0	10.4	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
26.12.2017	49.7	25.9	7.1	10.3	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
NAAQ Standard	100	60	80	<b>8</b> 0	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetri c Method as per CPCB method	IS: 5182		IS: 5182 (Part-10)		IS: 5182		1		IS: 5182 (Part- 11)	IS: 518 (Part- 12)
		nietuoa				CPCB			AAS	AAS		

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

#### Dr.T. Sahu RhD. Env. Sc. FEL ST 1055-Juieu161 (GAZAJILE NO JOP DI-03-UR 2018)

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- No 307 DI-03-UR 2018) The result given above related to the tested sample, areceived. The sustomer asked for the above test only. This Test Report shall not be reproduced wholly or in part without pror written consent of the laboratory. The samples received shall be destroyed after two weeksphirth the date of issue of the Test Report unless ⋟ specified otherwise.
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Report no. - CEMC/TDPCL/020118/N

### Issued Date-02.01.2018

#### NOISE LEVEL MONITORING REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Analysis No.	CEMC/TDPCL-D00N1
Nature of Sampling	Noise Sample
Sampling By	Mr. Biswaranjan Behera
Sampling Date	01.12.2017 to 31.12.2017

D - 4-	Location	NL D	ay Time dl	B (A)	NL Night Time dB (A)		
Date	Location	Max	Min.	Avg.	Max.	Min.	Avg.
05.12.2017	Colony Area (R)	53.7	49.2	51.4	44.2	37.3	40.7
27.12.2017	Kanakaprasad Village (R)	53.1	48.4	50.7	42.9	36.8	39,8
08.12.2017	Near BMH (I)	74.1	67.3	70.7	68.9	60.7	64.8
13.12.2017	Near Jetty (I)	70.9	66.4	68.6	69.6	63.1	66.3
29.12.2017	Dosinga village (R)	54.1	47.9	51	43.1	36.9	40
20.12.2017	Bhitarkanika (R)	50.9	45.2	48.1	40.8	36.2	38.5

\*NL- Noise Level, I- Industrial, R- Residential

#### National Standard of Noise Level

Area	Catagowy of AmeriZana	Permissible Limit in dB(A)				
Code	Category of Area/Zone	Day Time	Night Time			
A	Industrial Area	75	70			
В	Commercial Area	65	55			
С	Residential Area	55	45			
D	Silence Zone	50	40			

Dr.T. Sahn, PhD. Env. Sc. Authorized Signatory S

(GN3653:1E NOT3351, DE03.08. 2016)



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Report no. - CEMC/TDPCL/020118/W1

Issued Date-02.01.2018

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description **Sample Quantity** Sample Location with Job Code : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak

- : 4800026792, dtd-22.07.2017
- : Biswaranjan Behera
- : 15.12.2017 & 23.12.2017
- : 16.12.2017 & 24.12.2017
- : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 15 KLD (Inlet-CEMC/17-18/433W &
- 445W)
- : CEMC-02012018(433&445)W

### **Reference Number**

### STP INLET RESULT

SI.		Tuit of	Res	sult	Design parameter for Daw
No.	Parameter	Unit of Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design parameter for Raw Sewage
I	Appearance		Turbid	Turbid	-
2	Colour		Blackish	Blackish	-
3	Odour		Foul	Foul	-
4	pH Value @ 25°C		6.74	6.93	6.0-8.5
5	Total Suspended Solids	mg/l	137.3	129.8	1000
6	B.O.D for 3 days @ 27°C	mg/i	210	220	300-350
7	Oil & Grease	mg/l	<5	<5	100
8	COD	mg/l	470	460	
9	Ammonical Nitrogen	mg/l	6.9	6.7	
10	Total Nitrogen	mg/l	31.6	33.5	
11	Faecal Coliform	MPN/100ml	1600	1600	

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Report no. - CEMC/TDPCL/020118/W2

Issued Date-02.01.2018

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling **Date of Receiving** Sampling & Testing Procedure **Sample Description** Sample Quantity Sample Location with Job Code

**Reference Number** 

- : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
- : 4800026792, dtd-22.07.2017
- : Biswaranjan Behera
- : 15.12.2017 & 23.12.2017
- : 16.12.2017 & 24.12.2017 : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 15 KLD (Outlet-CEMC/17-18/434W &
- 446W)
- : CEMC-02012018(434&446)W

### STP OUTLET RESULT

01		The factor	Res	ult	Standards for New STPs	
SI. No.	Parameter	Unit of Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design after notification 2015	
1	Appearance		Clear	Clear	-	
2	Colour		Colorless	Colorless	-	
3	Odour		Odourless	Odourless	-	
4	pH Value @ 25°C		7.28	7.31	6.5-9.0	
5	Total Suspended Solids	mg/l	16.4	17.2	<20	
6	B.O.D for 3 days @ 27°C	mg/l	8.8	9.2	<10	
7	Oil & Grease	mg/l	<5	<5		
8	COD	mg/l	32	40	<50	
9	Ammonical Nitrogen	mg/l	1.4	1.2	<5	
10	Total Nitrogen	mg/i	8.7	8.9	<10	
11	Faecal Coliform	MPN/100ml	35	35	<100	

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Report no. - CEMC/TDPCL/020118/W3

Issued Date-02.01.2018

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling **Date of Receiving** Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code

**Reference Number** 

: M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak

- : 4800026792, dtd-22.07.2017
- : Biswaranjan Behera
- : 15.12.2017 & 23.12.2017
- : 16.12.2017 & 24.12.2017 : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 140 KLD (Inlet-CEMC/17-18/435W & 447W)
- : CEMC-02012018(435&447)W

### STP INLET RESULT

SI.		Unit of	Re	sult	Design nonemator for Design
No.	Parameter	Measurement	1 <sup>st</sup>	2 <sup>nd</sup>	Design parameter for Raw Sewage
			Fortnight	Fortnight	
1	Appearance		Turbid	Turbid	-
2	Colour		Blackish	Blackish	-
3	Odour		Foul	Foul	_
4	pH Value @ 25°C		7.03	7.09	6.0-8.5
5	Total Suspended Solids	mg/l	151.3	142.8	. 1000
6	B.O.D for 3 days @ 27°C	mg/l	240	200	300-350
7	Oil & Grease	mg/l	8.1	8.4	100
8	COD	mg/l	910	860	
9	Ammonical Nitrogen	mg/l	8.2	7.8	
10	Total Nitrogen	mg/l	36.4	39.7	
11	Faecal Coliform	MPN/100ml	>1600	>1600	

Dr. K SaRu RhD. Env. Sc. Authori byst (GAZEL i LTA



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Report no. - CEMC/TDPCL/020118/W4

Issued Date-02.01.2018

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by **Date of Sampling** Date of Receiving Sampling & Testing Procedure **Sample Description** Sample Quantity Sample Location with Job Code

**Reference Number** 

: M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak

- : 4800026792, dtd-22.07.2017
- : Biswaranjan Behera
- : 15.12.2017 & 23.12.2017
- : 16.12.2017 & 24.12.2017
- : APHA 23rd Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 140 KLD (Outlet-CEMC/17-18/436W &
- 448W)
- : CEMC-02012018(436&448)W

### STP OUTLET RESULT

SI.		TT-iA of	Res	ult	Standards for New STPs
51. No.	Parameter	Unit of Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design after notification 2015
1	Appearance		Clear	Clear	-
2	Colour		Colorless	Colorless	-
3	Odour		Odourless	Odourless	
4	pH Value @ 25°C		7.22	7.24	6.5-9.0
5	Total Suspended Solids	mg/l	16.3	16.1	<20
6	B.O.D for 3 days @ 27°C	mg/l	8.4	8.8	<10
7	Oil & Grease	mg/l	<5	<5	
8	COD	mg/l	40	36	<50
9	Ammonical Nitrogen	mg/l	1.9	2.1	<5
10	Total Nitrogen	mg/l	5.7	6.1	<10
11	Faecal Coliform	MPN/100ml	35	35	<100

Dr. T. Frady OPhD. Env. Sc. Authorized Signatury 8 5. T



- (GAZETTE No. 135): Di-(13-(15-2)(15)
   (GAZETTE No. 135): Di-(13-(15-2)(15))
   (GAZETTE No. 135): Di-(13-(16-2)(15))
   (GAZETTE No. 135): Di-(13-(16-2)(15-(16-2)(15)))
   (GAZETTE No. 135): Di-(13-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(16-2)(15-(15-(16-2)( specified otherwise.
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### Report no. - CEMC/TDPCL/020118/St1

#### Issued Date-02.01.2018

### DG STACK ANALYSIS REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02012018St1
Nature of Sampling	DG Stack Monitoring
Sampling Location	GSS DG Set (200KVA) 160KW-hr
Sampling By	Mr. Biswaranjan Behera
Sampling Date	15.12.2017

#### ANALYSIS RESULT

Sl. No.	Parameters	Result	Standard as per MoEF & CC in g/kW-hr (2014)	Method of Testing
1.	Flue Gas Temp.(K)	471		IS:11255 (Part-3)
2.	Average Flue Gas Velocity(m/s)	9.6		IS:11255 (Part-3
3.	PM (g/kwh)	0.13	0.2	IS:11255 (Part-1)
4.	SO <sub>2</sub> (g/kwh)	0		IS:11255 (Part-2)
5.	NO <sub>x</sub> +HC (g/kwh)	3.2	4.0	IS:11255 (Part-7)
6.	CO (g/kwh)	1.6	3.5	IS : 13270

H = h+0.2x (KVA)<sup>1/2</sup> (H = Total height of stack in metre, h = Height of the building in metres where the generator set is installed, KVA = Total generator capacity of the set in KVA)

DATA Notes GC.



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Report no. - CEMC/TDPCL/020118/St2

Issued Date-02.01.2018

### DG STACK ANALYSIS REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02012018St2
Nature of Sampling	DG Stack Monitoring
Sampling Location	Kalibhanja Guest House DG Set (63KVA) 50KW-hr
Sampling By	Mr. Biswaranjan Behera
Sampling Date	15.12.2017

### ANALYSIS RESULT

SI. No.	Parameters	Result	Standard as per MoEF & CC in g/kW-hr (2014)	Method of Testing
1.	Flue Gas Temp.(K)	437		IS:11255 (Part-3)
2.	Average Flue Gas Velocity(m/s)	9.4		IS:11255 (Part-3
3.	PM (g/kwh)	0.12	0.3	IS:11255 (Part-1)
4.	SO <sub>2</sub> (g/kwh)	0		IS:11255 (Part-2)
5.	NO <sub>x</sub> +HC (g/kwh)	2.9	4.7	IS:11255 (Part-7)
6.	CO (g/kwh)	1.1	3.5	IS : 13270

 $H = h+0.2x (KVA)^{1/2}$  (H = Total height of stack in metre , h = Height of the building in metres where the generator set is installed, KVA = T otal generator capacity of the set in KVA)

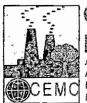
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### Report no. - CEMC/TDPCL/020118/St3

#### Issued Date-02.01.2018

#### DG STACK ANALYSIS REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak	
Work Order No.	4800026792, dtd-22.07.2017	
Reference No.	CEMC-02012018St3	
Nature of Sampling	DG Stack Monitoring	
Sampling Location	Township DG Set (180KVA) 144KW-hr	
Sampling By	Mr. Biswaranjan Behera	
Sampling Date	15.12.2017	

#### ANALYSIS RESULT

SI. No.	Parameters	Result	Standard as per MoEF & CC (2014)	Method of Testing
1.	Flue Gas Temp.(K)	479		IS:11255 (Part-3)
2.	Average Flue Gas Velocity(m/s)	8.8		IS:11255 (Part-3
3.	PM (g/kwh)	0.14	0.2	IS:11255 (Part-1)
4.	SO <sub>2</sub> (g/kwh)	0		IS:11255 (Part-2)
5.	NO <sub>x</sub> +HC (g/kwh)	3.7	4.0	IS:11255 (Part-7)
6.	CO (g/kwh)	1.6	3.5	IS : 13270

 $H = h+0.2x (KVA)^{1/2}$  (H = Total height of stack in metre , h = Height of the building in metres where the generator set is installed, KVA = Total generator capacity of the set in KVA)

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Report no. - CEMC/TDPCL/020118/St4

#### Issued Date-02.01.2018

#### DG STACK ANALYSIS REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02012018St4
Nature of Sampling	DG Stack Monitoring
Sampling Location	MCC-1 ( 160KVA) 128 KW-hr
Sampling By	Mr. Biswaranjan Behera
Sampling Date	15.12.2017

#### ANALYSIS RESULT

SI. No.	Parameters	Result	Standard as per MoEF & CC (2014)	Method of Testing
1.	Flue Gas Temp.(K)	441		IS:11255 (Part-3)
2.	Average Flue Gas Velocity(m/s)	8.5		IS:11255 (Part-3
3.	PM (g/kwh)	0.11	0.2	IS:11255 (Part-1)
4.	SO <sub>2</sub> (g/kwh)	0		IS:11255 (Part-2)
5.	NO <sub>x</sub> +HC (g/kwh)	3.3	4.0	IS:11255 (Part-7)
6.	CO (g/kwh)	1.2	3.5	IS : 13270

 $H = h+0.2x (KVA)^{1/2} (H = Total height of stack in metre, h = Height of the building in metres where the generator set is installed, KVA = Total generator capacity of the set in KVA)$ 



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### Report no. - CEMC/TDPCL/020118/St5

#### Issued Date-02.01.2018

#### DG STACK ANALYSIS REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02012018St5
Nature of Sampling	DG Stack Monitoring
Sampling Location	PSS DG Set (160KVA) 128 KW-hr
Sampling By	Mr. Biswaranjan Behera
Sampling Date	15.12.2017

#### ANALYSIS RESULT

SI. No.	Parameters	Result	Standard as per MoEF & CC (2014)	Method of Testing
1.	Flue Gas Temp.(K)	459		IS:11255 (Part-3)
2.	Average Flue Gas Velocity(m/s)	9.1		IS:11255 (Part-3
3.	PM (g/kwh)	0.14	0.2	IS:11255 (Part-1)
4.	SO <sub>2</sub> (g/kwh)	0		IS:11255 (Part-2)
5.	NO <sub>x</sub> +HC (g/kwh)	3.5	4.0	IS:11255 (Part-7)
6.	CO (g/kwh)	1.7	3.5	IS : 13270

 $H = h+0.2x (KVA)^{1/2} (H = Total height of stack in metre , h = Height of the building in metres where the generator set is installed, KVA = Total generator capacity of the set in KVA)$ 

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Report no. - CEMC/TDPCL/020118/St6

Issued Date-02.01.2018

### DG STACK ANALYSIS REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak	
Work Order No.	4800026792, dtd-22.07.2017	
Reference No.	CEMC-02012018St6	
Nature of Sampling	DG Stack Monitoring	
Sampling Location	MCC-4 (160KVA) 128 KW-hr	
Sampling By	Mr. Biswaranjan Behera	
Sampling Date	15.12.2017	

#### ANALYSIS RESULT

Sl. No.	Parameters	Result	Standard as per MoEF& CC (2014)	Method of Testing
1.	Flue Gas Temp.(K)	459		IS:11255 (Part-3)
2.	Average Flue Gas Velocity(m/s)	9.1		IS:11255 (Part-3
3.	PM (g/kwh)	0.14	0.2	IS:11255 (Part-1)
4.	SO <sub>2</sub> (g/kwh)	0		IS:11255 (Part-2)
5.	NO <sub>x</sub> +HC (g/kwh)	3.4	4.0	IS:11255 (Part-7)
6.	CO (g/kwh)	1.7	3.5	IS : 13270

 $H = h+0.2x (KVA)^{1/2} (H = Total height of stack in metre, h = Height of the building in metres where the generator set is installed, KVA = Total generator capacity of the set in KVA)$ 



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### Report no. - CEMC/TDPCL/020218/A1

#### Issued Date-02.02.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak			
Work Order No.	4800026792, dtd-22.07.2017			
Reference No.	CEMC-02022018A1			
Nature of Sampling	Ambient Air Sample			
Sampling Location	Colony Area			
Sampling By	Mr. Santosh Ku Mohanty			
Sampling Duration	01.01.2018 to 31.01.2018			

	Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO2 (µg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Рb (µg/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m <sup>3</sup> )
	02.01.2018	58.3	29.8	6.9	12.3	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
	05.01.2018	54.9	28.1	6.7	12.1	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
	08.01.2018	57.6	29.3	7.0	12.4	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	11.01.2018	56.2	28.7	6.8	12.2	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	16.01.2018	55.8	28.3	7.1	12.5	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	19.01.2018	59.1	30.2	6.9	12.3	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
`	22.01.2018	56.8	28.6	7.2	12.5	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
	25.01.2018	58.1	29.4	7.1	12.3	0.3	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
	NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
~	Methods of Analysis	IS: 5182 (Part- 23)	Method as	IS: 5182 (Part-2)	19: 2197	IPOPL_	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-9)	(	followed		IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

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

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(GAZE THE The tosult given above related to the tested sample, as received. The cost omer asked for the above test only.

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Report no. - CEMC/TDPCL/020218/A2

Issued Date-02.02.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02022018A2
Nature of Sampling	Ambient Air Sample
Sampling Location	Kanakaprasad Village
Sampling By	Mr. Santosh Ku Mohanty
Sampling Duration	01.01.2018 to 31.01.2018

Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	РМ <sub>2.5</sub> (µg/m <sup>3</sup> )	SO2 (µg/m3)	NOx (µg/m3)	CO (mg/m3)	NH3 (µg/m3)	О3 (µg/m3)	Рb (µg/m3)	Ni (ng/m3)	As (ng/m3)	Benzene (µg/m3)	BaP (ng/m3)
02.01.2018	53.8	27.9	6.8	12.0	0.2	<20	<10	<0.06	<0.6	< 0.44	<5	<1
05.01.2018	51.6	26.8	7.0	12.2	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
08.01.2018	54.1	27.5	7.2	12.3	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
11.01.2018	55.4	28.2	6.9	12.1	0.3	<20	<10	<0.06	<0.6	< 0.44	<5	<1
16.01.2018	52.9	27.1	6.7	11.9	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
19.01.2018	53.7	27.4	7.1	12.2	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
22.01.2018	51.9	27.2	6.8	12.0	0.2	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
25.01.2018	55.2	28.3	7.3	12.4	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)		IS: 5182		IS: 5182 (Part-10)	Indophen ols Blue Method followed by CPCB	IS: 5182 (Part-9)	IS: 5182 (Part- 22)	method	CPCB method	IS: 5182 (Part-11)	

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

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### Report no. - CEMC/TDPCL/020218/A3

#### Issued Date-02.02.2018

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02022018A3
Nature of Sampling	Ambient Air Sample
Sampling Location	Near BMH
Sampling By	Mr. Santosh Ku Mohanty
Sampling Duration	01.01.2018 to 31.01.2018

	Date	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	03	Pb	Ni	As	Benzene	BaP
	Date	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(mg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	$(\mu g/m^3)$	$(\mu g/m^3)$	$(ng/m^3)$	(ng/m <sup>3</sup> )	(µg/m³)	$(ng/m^3)$
, I	02.01.2018	58.4	30.3	7.7	13.1	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	05.01.2018	59.1	30.7	7.2	12.4	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
,	08.01.2018	57.2	28.1	7.6	13.0	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
۱ ۱	11.01.2018	57.9	28.5	7.8	13.3	0.5	<20	<10	<0.06	<0.6	<0.44	<5	<1
	16.01.2018	56,4	28.7	7.3	12.6	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
·	19.01.2018	59.4	30.2	7.1	12.2	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
	22.01.2018	57.6	29.4	7.5	12.9	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
	25.01.2018	56.9	29.1	7.6	13.0	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
	NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
_		÷	Gravimetri c Method	1		TC. 5195	Indophe nol Blue			As per CPCB	As per CPCB		IS: 5182
	Methods of	IS: 5182	as nor		12: 2185	(Part_			IS: 5182		1 1	IS: 5182	(Part-
	Analysis	(Part-23)	СРСВ	(Part-2)	(Part-6)	10)		(Part-9)	(Part-22)			(Part-11)	12)
			method				by			d by	d by		
			monou				CPCB			AAS	AAS		

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

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### Report no. - CEMC/TDPCL/020218/A4

#### Issued Date-02.02.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02022018A4
Nature of Sampling	Ambient Air Sample
Sampling Location	Near Jetty
Sampling By	Mr. Santosh Ku Mohanty
Sampling Duration	01.01.2018 to 31.01.2018

Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m <sup>3</sup> )	NOx (μg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH3 (μg/m <sup>3</sup> )	О <sub>3</sub> (µg/m <sup>3</sup> )	Pb (µg/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup>	Benzene (µg/m³)	BaP (ng/m <sup>3</sup>
02.01.2018	92.6	41.0	7.5	12.0	0.2	<20	<10	<0.00	<0.6		<5	
02.01.2018	82.6	41.8	7.5	12.9	0.3	<20	<10	<0.06	<0.6	< 0.44	·	<1
05.01.2018	79.9	40.1	7.8	13.2	0.5	<20	<10	< 0.06	<0.6	<0.44	<5	<1
08.01.2018	82.3	42.3	7.2	12.8	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
11.01.2018	81.8	41.9	7.1	12.5	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
16.01.2018	83.2	42.4	7.7	13.1	0.5	<20	<10	<0.06	<0.6	<0.44	<5	<1
19.01.2018	83.1	41.8	7.5	13.0	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
22.01.2018	82.5	42.7	7.7	13.2	0.5	<20	<10	< 0.06	<0.6	<0.44	<5	<1
25.01.2018	83.7	43.1	7.8	13.1	0.5	<20	<10	< 0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetri c Method as per CPCB method	IS: 5182	IS: 5182 (Part-6)	(Dowt 10)	Indophe nols Blue Method followed by CPCB	IS: 5182	IS: 5182 (Part-22)	As per CPCB method followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182	IS: 518 (Part- 12)

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

nv. Sc.



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Report no. - CEMC/TDPCL/020218/A5

Issued Date-02.02.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02022018A5
Nature of Sampling	Ambient Air Sample
Sampling Location	Dosinga Village
Sampling By	Mr. Santosh Ku Mohanty
Sampling Duration	01.01.2018 to 31.01.2018

Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	О <sub>3</sub> (µg/m <sup>3</sup> )	Pb (µg/m <sup>3</sup> )	Ni $(ng/m^3)$	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/n
Date	(µg/m )	(µg/m)	(#5/117)	(trg/m )		(µgm)	(heg.m.)	(µ6, … )	("g/")	(	(48,)	)
02.01.2018	54.6	27.8	7.2	12.6	0.3	<20	<10	< 0.06	_<0.6	<0.44	<5	<1
05.01.2018	55.4	28.1	7.0	12.3	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
08.01.2018	53.5	27.4	7.6	12.9	0.4	<20	<10	_<0.06	<0.6	<0.44	<5	<1
11.01.2018	57.1	29.2	6.9	12,2	0.2	<20	<10	<0.06	<0.6	< 0.44	<5	_<1
16.01.2018	52.9	27.1	7.7	12.8	0.5	<20	<10	<0.06	<0.6	<0.44	<5	<1
19.01.2018	56.6	28.7	7.3	12.5	0.3	<20	<10	<0.06	<0.6	<0.44	<5	
22.01.2018	55.3	28.2	7.1	12.2	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
25.01.2018	53.8	27.3	7.6	12.8	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetri c Method as per CPCB method				Indophe nols Blue Method followed by CPCB	IS: 5182	IS: 5182 (Part-22)			IS: 5182 (Part- 11)	IS: 5182 (Part 12)

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

Dratter And State Provenue Sc.



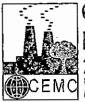
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Report no. - CEMC/TDPCL/020218/A6

Issued Date-02.02.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-02022018A6
Nature of Sampling	Ambient Air Sample
Sampling Location	Bhitarkanika (Eco Sensitive)
Sampling By	Mr. Santosh Ku Mohanty
Sampling Duration	01.01.2018 to 31.01.2018

Date	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	$O_3$	Pb	Ni	As	Benzene	
	(µg/m²)	(µg/m³)	(µg/m')	(µg/m³)	(mg/m <sup>3</sup> )	(µg/m³)	$(\mu g/m^3)$	(µg/m <sup>3</sup> )		$(ng/m^3)$	(µg/m <sup>3</sup> )	(ng/m <sup>3</sup>
02.01.2018	46.8	23.9	6.8	10.9	0.2	<20	<10	<0.06	<0.6	<0.44	<5	<1
05.01.2018	48.1	24.3	6.6	10.7	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
08.01.2018	50.2	24.9	6.9	11.0	0.3	<20	<10	<0.06	<0.6	< 0.44	<5	<1
11.01.2018	47.4	23.8	7.1	11.2	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
16.01.2018	46.5	23.9	7.2	11.4	0.4	<20	<10	< 0.06	<0.6	_<0.44	<5	<1
19.01.2018	48.4	24.7	7.1	10.9	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
22.01.2018	49.6	25.1	6.9	10.7	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
25.01.2018	48.3	24.6	6.7	10.4	0.2	<20	<10	<0.06	<0.6	< 0.44	<5	<1
NAAQ Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetri c Method as per CPCB method	IS: 5182	IS: 5182 (Part-6)			IS: 5182				IS: 5182 (Part- 11)	IS: 518: (Part- 12)

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

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Report no. - CEMC/TDPCL/020218/N

Issued Date-02.02.2018

### NOISE LEVEL MONITORING REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Analysis No.	CEMC/TDPCL-D00N1
Nature of Sampling	Noise Sample
Sampling By	Mr. Santosh Ku Mohanty
Sampling Date	01.01.2018 to 31.01.2018

Date	Location	NL I	ay Time dl	B (A)	NL Night Time dB (A)			
Date		Max	Min.	Avg.	Max.	Min.	Avg.	
04.01.2018	Colony Area (R)	54.3	50.1	52.2	43.8	37.9	40.8	
09.01.2018	Kanakaprasad Village (R)	53.7	49.2	51.4	41.9	36.1	39.0	
17.01.2018	Near BMH (I)	72.9	69.6	71.2	69.1	61.7	65.4	
23.01.2018	Near Jetty (I)	71.3	65.9	68.6	68.7	62.6	65.6	
29.01.2018	Dosinga village (R)	53,8	49.2	51.5	43.1	38.4	40.7	
31.01.2018	Bhitarkanika (R)	51.2	44.3	47.7	41.1	36.8	38.9	

\*NL- Noise Level, I- Industrial, R- Residential

#### National Standard of Noise Level

Area Code	Category of Area/Zone	Permissible L Day Time	imit_in.dB (A) Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

Dr.T. EAR MinD. Env. Sc.



Dr. 1: Dansburger Standborg - Y S T Authorized Standborg - Y S T (GAZETTE NO-1337, DI-03-06-2016) (GAZETTE NO-1337, DI-03-06-2016) (GAZETTE no-1337, DI-03-06-2016)

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### Report no. - CEMC/TDPCL/020218/W1

Issued Date-02.02.2018

#### STP REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code Reference Number : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak

- : 4800026792, dtd-22.07.2017
- : Santosh Ku Mohanty
- : 10.01.2018 & 25.01.2018
- : 11.01.2018 & 27.01.2018
- : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 15 KLD (Inlet-CEMC/17-18/542W&546W)
- : CEMC-02022018(542&546)W

#### STP INLET RESULT

SI.		Unit of	Res	sult	Design a serie of an fact Barry	
No.	Parameter	Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design parameter for Raw Sewage	
1	Appearance		Turbid	Turbid	-	
2	Colour		Blackish	Blackish	-	
3	Odour		Foul	Foul	-	
4	pH Value @ 25°C		6.79	7.02	6.0-8.5	
5	Total Suspended Solids	mg/l	128.9	132.3	1000	
6	B.O.D for 3 days @ 27°C	mg/l	230	240	300-350	
7	Oil & Grease	mg/l	<5	<5	100	
8	COD	mg/l	510	540		
9	Ammonical Nitrogen	mg/l	7.2	7.7		
10	Total Nitrogen	mg/i	33.9	37.3		
11	Faecal Coliform	MPN/100ml	1600	1600		

Dr. Tuttonice Standard ST Note: OVL STAND Env. Sc.



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Report no. - CEMC/TDPCL/020218/W2

Issued Date-02,02,2018

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code **Reference Number** 

- : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak : 4800026792, dtd-22.07.2017 : Santosh Ku Mohanty : 10.01.2018 & 25.01.2018 : 11.01.2018 & 27.01.2018 : APHA 23rd Edition : Waste Water : 1.0 Ltr each : STP - 15 KLD (Outlet-CEMC/17-18/543W&546W)
- : CEMC-02022018(543&546)W

### STP OUTLET RESULT

		Unit of	Res	ult	Standards for New STPs			
SI. No.	Parameter	Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design after notification 2015			
1	Appearance		Clear	Clear	-			
2	Colour		Colorless	Colorless	-			
3	Odour		Odourless	Odourless	-			
4	pH Value @ 25°C		7.27 7.30		6.5-9.0			
5	Total Suspended Solids	mg/l	14.9	15.3	<20			
6	B.O.D for 3 days @ 27°C	mg/l	9.1	8.9	<10			
7	Oil & Grease	mg/l	<5	<5				
8	COD	mg/l	36	34	<50			
9	Ammonical Nitrogen	mg/l	1.1	1.3	<5			
10	Total Nitrogen	mg/l	7.9	7.6	<10			
11	Faecal Coliform	MPN/100ml	35	35	<100			

ny. Sc.



Dr. Notes: AFALVST Characteristic Strength of the above test only (GAZETHE This Test Report shall not be reproduced wholly or in part content of the laboratory. ustomer asked for the above test only.

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Report no. - CEMC/TDPCL/020218/W3

Issued Date-02.02.2018

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by **Date of Sampling Date of Receiving** Sampling & Testing Procedure **Sample Description** Sample Quantity Sample Location with Job Code **Reference** Number

- : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
- : 4800026792, dtd-22.07.2017
- : Santosh Ku Mohanty
- : 10.01.2018 & 25.01.2018
- : 11.01.2018 & 27.01.2018
- : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 140 KLD (Inlet-CEMC/17-18/544 W&546W)
- : CEMC-02022018(544&546)W

### STP INLET RESULT

SI.		Unit of	Res	sult	Design parameter for Daw		
No.	Parameter	Measurement	1st Fortnight	2nd Fortnight	Design parameter for Raw Sewage		
1	Appearance		Turbid	Turbid	-		
2	Colour		Blackish	Blackish	-		
3	Odour		Foul	Foul	-		
4	pH Value @ 25□C		7.16	7.19	6.0-8.5		
5	Total Suspended Solids	mg/l	163.2	156.9	1000		
6	B.O.D for 3 days @ 27 C	mg/l	210	230	300-350		
7	Oil & Grease	mg/l	8.9	9.4	100		
8	COD	mg/l	880	920			
9	Ammonical Nitrogen	mg/l	8.8	8.6			
10	Total Nitrogen	mg/l	42.3 38.6				
11	Faecal Coliform	MPN/100ml	>1600	>1600			

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Report no. - CEMC/TDPCL/020218/W4

Issued Date-02.02.2018

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code Reference Number : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak

- : 4800026792, dtd-22.07.2017
- : Santosh Ku Mohanty
- : 10.01.2018 & 25.01.2018
- : 11.01.2018 & 27.01.2018
- : APHA 23rd Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 140 KLD (Outlet-CEMC/17-18/545W&546W)
- : CEMC-02022018(545&546)W

### STP OUTLET RESULT

SI.		Unit of	Res	ult	Standards for New STPs		
No.	Parameter	Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design after notification 2015		
1	Appearance		Clear	Clear	-		
2	Colour		Colorless	Colorless	-		
3	Odour		Odourless	Odourless			
4	pH Value @ 25°C		7.21	7.23	6.5-9.0		
5	Total Suspended Solids	mg/l	16.1	16.2	<20		
6	B.O.D for 3 days @ 27°C	mg/l	8.6	8.4	<10		
7	Oil & Grease	mg/l	<5	<5			
8	COD	mg/l	36	39	<50		
9	Ammonical Nitrogen	mg/l	1.8	2.0	<5		
10	Total Nitrogen	mg/l	5.8	6.0	<10		
11	Faecal Coliform	MPN/100ml	35 35		<100		

TEAV. Sc. Dr. Hut ALAST



GAZET LE NO. 1 Solution above related to the tested sample, as received. The customer asked for the above test only.

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### Report no. - CEMC/TDPCL/030318/A1

#### Issued Date-03.03.2018

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak			
Work Order No. 4800026792, dtd-22.07.2017				
Reference No.	CEMC-03032018A1			
Nature of Sampling	Ambient Air Sample			
Sampling Location	Colony Area			
Sampling By	Mr. Santosh Ku Mohanty			
Sampling Duration	01.02.2018 to 28.02.2018			

1	Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	РМ <sub>2.5</sub> (µg/m <sup>3</sup> )	$\frac{SO_2}{(\mu g/m^3)}$	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	О <sub>3</sub> (µg/m <sup>3</sup> )	Pb (µg/m³)	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	
	01.02.2018	59.2	30.0	7.2	12.5	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	05.02.2018	55.4	28.4	6.8	12.3	0.4	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
ĺ	08.02.2018	56.8	29.7	7.1	12.6	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
	12.02.2018	54.6	29.2	7.0	12.4	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
`	15.02.2018	56.2	28.6	7.2	12.1	0.4	<20	<10	<0.06	<0.6	< 0.44	<5	<1
	19.02.2018	58.6	29.8	6.8	12.3	0.3	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
``	22.02.2018	57.4	29.5	6.6	12.2	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
	26.02.2018	57.9	30.2	7.2	12.1	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
,	NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
•	Methods of Analysis	IS: 5182 (Part- 23)	Gravimetric Method as per CPCB method	IS: 5182	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-9)	IS: 5182 (Part- 22)	followed	As per CPCB method followed by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

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

Dr.T. Sabu PhD, Env. Sc. Authorized Statutory



GAZENotes: 0-13512 2316) The result given above related to the tested sample, as received. The customer/asked for the above test only.

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Report no. - CEMC/TDPCL/030318/A2

Issued Date-03.03.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03032018A2
Nature of Sampling	Ambient Air Sample
Sampling Location	Kanakaprasad Village
Sampling By	Mr. Santosh Ku Mohanty
Sampling Duration	01.02.2018 to 28.02.2018

Date	PM <sub>10</sub>	PM <sub>2.5</sub>	SO2	NOx	СО	NH3	03	Pb	Ni	As	Benzene	1
Date	$(\mu g/m^3)$	(μg/m <sup>3</sup> )	(µg/m3)	(µg/m3)	(mg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	(ng/m3)	(ng/m3)	(µg/m3)	(ng/m3)
01.02.2018	54.2	28.4	7.1	12.4	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
05.02.2018	52.8	27.6	7.3	12.1	0.2	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
08.02.2018	55.4	28.1	7.0	12.0	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
12.02.2018	56.6	27.9	6.8	12.3	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
15.02.2018	53.8	27.6	6.9	12.1	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
19.02.2018	54.7	27.8	7.2	12.3	0.3	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
22.02.2018	52.7	28.5	6.9	12.1	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
26.02.2018	56.2	28.1	7.2	12.2	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)		IS: 5182		IS: 5182 (Part-10)	Indophen ols Blue Method followed by CPCB	IS: 5182 (Part-9)	IS: 5182 (Part- 22)	As per CPCB method followe d by AAS		IS: 5182 (Part-11)	

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

Env. Sc. Htho Notes:



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Report no. - CEMC/TDPCL/030318/A3

Issued Date-03.03.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

-		
	Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
	Work Order No.	4800026792, dtd-22.07.2017
ŀ	Reference No.	CEMC-03032018A3
	Nature of Sampling	Ambient Air Sample
, _ ,	Sampling Location	Near BMH
	Sampling By	Mr. Santosh Ku Mohanty
5	Sampling Duration	01.02.2018 to 28.02.2018

-)	Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	$\frac{SO_2}{(\mu g/m^3)}$	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (μg/m <sup>3</sup> )	BaP (ng/m <sup>3</sup> )
r l	01.02.2018	56.7	30.4	7.8	13.5	0.3	<20	<10	< 0.06	<0.6	<0.44.	<5	<1
	05.02.2018	58.2	30.5	7.6	12.1	0.4	<20	<10	< 0.06	<0.6	< 0.44	<5	<1
_	08.02.2018	58.6	28.4	7.9	13.2	0.3	<20	<10	<0.06	<0.6	< 0.44	<5	<1
<i>'</i>	12.02.2018	57.4	28.8	7.4	13.6	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
	15.02.2018	56.9	29.6	7.5	12.4	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
1	19.02.2018	59.1	30.4	7.3	12.5	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
	22.02.2018	58.6	29.8	7.7	12.7	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
~	26.02.2018	57.4	29.5	7.9	13.2	0.5	<20	<10	<0.06	<0.6	<0.44	<5	<1
-	NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
	Methods of Analysis	IS: 5182 (Part-23)	00 007	IS: 5182	IS: 5182 (Part-6)	IS: 5182		IS: 5182	IS: 5182 (Part-22)			IS: 5182 (Part-11)	IS: 5182 (Part- 12)

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

Dr. T ChywphB. Env. Sc. Author bed Sommung Wig ST

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Report no. - CEMC/TDPCL/030318/A4

Issued Date-03.03.2018

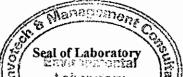
### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak	
Work Order No.	4800026792, dtd-22.07.2017	
Reference No.	CEMC-03032018A4	
Nature of Sampling	Ambient Air Sample	
Sampling Location	Near Jetty	
Sampling By	Mr. Santosh Ku Mohanty	
Sampling Duration	01.02.2018 to 28.02.2018	

	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	03	Pb	Ni	As	Benzene	
Date	(μg/m <sup>3</sup> )	$(\mu g/m^3)$	(µg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(mg/m <sup>3</sup> )	(µg/m³)	(µg/m³)	(µg/m³)	(ng/m <sup>3</sup> )	(ng/m <sup>3</sup>	$(\mu g/m^3)$	(ng/m <sup>3</sup>
										<u>)</u>		
01.02.2018	81.4	41.2	7.2	13.1	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
05.02.2018	78.8	40.4	7.6	13.4	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
08.02.2018	80.4	40.5	7.7	12.6	0.5	<20	<10	< 0.06	<0.6	<0.44	<5	<1
12.02.2018	81.3	41.1	7.4	12.7	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
15.02.2018	81.8	41.7	7.9	13.3	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
19.02.2018	81.7	41.6	7.7	13.1	0.5	<20	<10	<0.06	<0.6	<0.44	<5	<1
22.02.2018	80.9	40.7	7.4	13.3	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
26.02.2018	79.8	39.8	7.7	13.4	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	l as ner	IS: 5182	IS: 5182 (Part-6)	(Dowt 10)	Indophe nols Blue Method followed by CPCB	IS: 5182	IS: 5182 (Part-22)	As per CPCB method followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182	IS: 518: (Part- 12)

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

ny Sc. Autho Notes:



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Report no. - CEMC/TDPCL/030318/A5

Issued Date-03.03.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03032018A5
Nature of Sampling	Ambient Air Sample
Sampling Location	Dosinga Village
Sampling By	Mr. Santosh Ku Mohanty
Sampling Duration	01.02.2018 to 28.02.2018

Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m <sup>3</sup> )	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m <sup>2</sup>
	(1-9)	4-8/				4.9 /		<b></b> ,				<u> </u>
01.02.2018	56.2	28.4	7.3	12.8	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
05.02.2018	54.8	28.7	7.2	12,5	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
08.02.2018	54.2	27.6	7.5	12.8	0.5	<20	<10	< 0.06	<0.6	<0.44	<5	<1
12.02.2018	57.5	28.8	7.0	12.4	0.3	<20	<10	<0.06	<0.6	<0.44	<5	<1
15.02.2018	53.4	27.6	7.5	12.7	0.4	<20	<10	<0.06	<0.6	<0.44	<5	<1
19.02.2018	57.2	28.3	7.5	12.3	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
22.02.2018	55.8	28.6	7.6	12.5	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	<1
26.02.2018	54.2	27.6	7.8	12.9	0.3	<20	<10	<0.06	<0,6	<0.44	<5	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetri c Method as per CPCB method	IS: 5182			Indophe nols Blue Method followed by CPCB	IS: 5182				IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

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

Dr.T. Aabu, PhD. Env. Sc.

Authorized Signatury

(GANGERSE NO- 3522)-03-06-20161

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Report no. - CEMC/TDPCL/030318/A6

Issued Date-03.03.2018

#### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03032018A6
Nature of Sampling	Ambient Air Sample
Sampling Location	Bhitarkanika (Eco Sensitive)
Sampling By	Mr. Santosh Ku Mohanty
Sampling Duration	01.02.2018 to 28.02.2018

	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	03	Pb	Ni	As	Benzene	
Date	(µg/m³)	(µg/m³)	(µg/m³)	(μg/m <sup>3</sup> )	(mg/m <sup>3</sup> )	(µg/m³)	(µg/m³)	(μg/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(ng/m <sup>3</sup> )	(µg/m³)	(ng/m
							 					)
01.02.2018	47.2	24.2	6.9	11.1	0.4	<20	<10	<0.06	<0.6	<u>&lt;0</u> .44	<5	<1
05.02.2018	48.5	24.1	6.8	10.9	0.2	<20	<10	< 0.06	<0.6	<0.44	<5	1
08.02.2018	49.2	24.5	6.5	11.2	0.3	<20	<10	<0.06	<0.6	< 0.44	<5	<1
12.02.2018	48.2	23.5	7.3	11.4	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
15.02.2018	46.8	24.2	7.4	11.2	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
19.02.2018	47.8	24.3	7.5	11.3	0.4	<20	<10	< 0.06	<0.6	<0.44	<5	<1
22.02.2018	48.7	25.4	6.7	10.8	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
26.02.2018	48.5	24.8	6.9	10.6	0.3	<20	<10	< 0.06	<0.6	<0.44	<5	<1
NAAQ Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetri c Method as per CPCB	IS: 5182			Indophe nol Blue Method followed by	IS: 5182				IS: 5182 (Part- 11)	IS: 5182 (Part- 12)
		method				CPCB			AAS	AAS		

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

Dr.T. S W. Sc. Authorized (GAZNotes:

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Report no. - CEMC/TDPCL/030318/N

#### Issued Date-03.03.2018

#### NOISE LEVEL MONITORING REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Analysis No.	CEMC/TDPCL-D00N1
Nature of Sampling	Noise Sample
Sampling By	Mr. Santosh Ku Mohanty
Sampling Date	01.02.2018 to 28.02.2018

Date	Location		Day Time dI	B (A)	NL Night Time dB (A)		
Date	Location	Max	Min.	Avg.	Max.	Min.	Avg.
06.02.2018	Colony Area (R)	55.4	51.2	53.3	44.4	38.2	41.3
16.02.2018	Kanakaprasad Village (R)	54.2	49.4	51.8	42.2	36.4	39.3
09.02.2018	Near BMH (I)	72.6	69.4	71	69.4	61.6	65.5
13.02.2018	Near Jetty (I)	71.5	65.8	68.6	68.9	62.5	65.7
20.02.2018	Dosinga village (R)	53.6	49.3	51.4	43.2	38.6	40.9
23.02.2018	Bhitarkanika (R)	51.6	44.5	48.0	41.8	35.4	38.6

\*NL- Noise Level, I- Industrial, R- Residential

#### National Standard of Noise Level

Area	Coto-com of Armo Zono	Permissible Limit in dB(A)					
Code	Category of Area/Zone	Day Time	Night Time				
A	Industrial Area	75	70				
B	Commercial Area	65	55				
C	Residential Area	55	45				
D	Silence Zone	50	40				

HAD. Env. Sc. D' Authorit XST Notes



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Report no. - CEMC/TDPCL/030318/W1

Issued Date-03.03.2018

### STP REPORT

Name & Address of the Customer

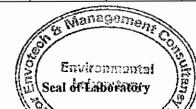
Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code **Reference** Number

- : M/s. The Dhamra Port Company Ltd., Dosinga, **Bhadrak** : 4800026792, dtd-22.07.2017 : Santosh Ku Mohanty : 09.02.2018 & 27.02.2018 : 10.02.2018 & 28.02.2018 : APHA 23rd Edition : Waste Water : 1.0 Ltr each
- : STP 15 KLD (Inlet-CEMC/17-18/542W&546W)
- : CEMC-03032018(542&546)W

#### STP INLET RESULT

61		TL-14 - C	Rea	sult	Design noremator for Daw
SI. No.	Parameter	Unit of Measurement	1 <sup>st</sup> Fortnight_	2 <sup>nd</sup> Fortnight	Design parameter for Raw Sewage
1	Appearance		Turbid	Turbid	-
2	Colour		Blackish	Blackish	_
3	Odour		Foul	Foul	
4	pH Value @ 25°C		6,55	6.92	6.0-8.5
5	Total Suspended Solids	mg/l	111.8	128.4	1000
6	B.O.D for 3 days @ 27°C	mg/l	210	222	300-350
7	Oil & Grease	mg/l	<5	<5	100
8	COD	mg/l	480	510	
9	Ammonical Nitrogen	mg/l	6.8	8.2	
10	Total Nitrogen	mg/l	32.2	38.4	
11	Faecal Coliform	MPN/100ml	1600	1600	

Dr.T Env. Sc. 857 (C Notes:



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Report no. - CEMC/TDPCL/030318/W2

Issued Date-03.03.2018

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling **Date of Receiving** Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code **Reference Number** 

- : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak : 4800026792, dtd-22.07.2017 : Santosh Ku Mohanty : 09.02.2018 & 27.02.2018
- : 10.02.2018 & 28.02.2018
- : APHA 23rd Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 15 KLD (Outlet-CEMC/17-18/543W&546W)
- : CEMC-03032018(543&546) W

### STP OUTLET RESULT

SL.		The idea of	Res	ult	Standards for New STPs
SL No.	Parameter	Unit of Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design after notification 2015
1	Appearance		Clear	Clear	-
2	Colour		Colorless	Colorless	-
3	Odour		Odourless	Odourless	-
4	pH Value @ 25°C		7.24	7.16	6.5-9.0
5	Total Suspended Solids	mg/l	16.2	13.8	<20
6	B.O.D for 3 days @ 27°C	mg/l	8.6	8.4	<10
7	Oil & Grease	mg/l	<5	<5	
8	COD	mg/l	32	30	<50
9	Ammonical Nitrogen	mg/l	1.8	1.4	<5
10	Total Nitrogen	mg/l	8.2	7.2	<10
11	Faecal Coliform	MPN/100ml	33	33	<100

Env. Sc. Dr.T. Sob

Authori

- 3-96-2016) (C. Notes:
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- written consent of the laboratory.

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#### Report no. - CEMC/TDPCL/030318/W3

Issued Date-03.03.2018

### STP REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code Reference Number : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak : 4800026792, dtd-22.07.2017

- : Santosh Ku Mohanty
- : 09.02.2018 & 27.02.2018
- : 10.02.2018 & 28.02.2018
- : APHA 23<sup>rd</sup> Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 140 KLD (Inlet-CEMC/17-18/544W&546W)
- : CEMC-03032018(544&546)W

### STP INLET RESULT

SI.		Unit of	Re	sult	Design parameter for Raw	
No.	Parameter	Measurement	1st Fortnight	2nd Fortnight	Sewage	
1	Appearance		Turbid	Turbid	-	
2	Colour		Blackish	Blackish	-	
3	Odour		Foul	Foul	_	
4	pH Value @ 25°C		7.02	7.14	6.0-8.5	
5	Total Suspended Solids	mg/l	148.8	162.2	1000	
6	B.O.D for 3 days @ 27°C	mg/l	180	210	300-350	
7	Oil & Grease	mg/l	8.2	8.9	100	
8	COD	mg/l	820	860		
9	Ammonical Nitrogen	mg/l	7.6	8.2		
10	Total Nitrogen	mg/l	30.4	36.8		
11	Faecal Coliform	MPN/100ml	>1600	>1600		

Dr.T. Babu OLD, Env. Sc. Authorize Service ST

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Report no. - CEMC/TDPCL/030318/W4

Issued Date-03.03.2018

#### STP REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code Reference Number : M/s. The Dhamra Port Company Ltd., Dosinga,

- Bhadrak
- : 4800026792, dtd-22.07.2017
- : Santosh Ku Mohanty
- : 09.02.2018 & 27.02.2018
- : 10.02.2018 & 28.02.2018
- : APHA 23rd Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 140 KLD (Outlet-CEMC/17-18/545W&546W)
- : CEMC-03032018(545&546)W

### STP OUTLET RESULT

Sl.		Unit of	Res	ult	Standards for New STD	
No.	Parameter	Measurement	1 <sup>32</sup> 7 <sup>10</sup>		Standards for New STPs Design after notification 2015	
1	Appearance		Clear	Clear	-	
2	Colour		Colorless	Colorless	-	
3	Odour			Odourless	-	
4	pH Value @ 25°C		7.24	7.28	6.5-9.0	
5	Total Suspended Solids	mg/l	14.6	15.4	<20	
6	B.O.D for 3 days @ 27°C	mg/l	9.0	8.8	<10	
7	Oil & Grease	mg/l	<5	<5		
8	COD	mg/l	34	32	<50	
9	Ammonical Nitrogen	mg/i	1.2	1.4	<5	
10	Total Nitrogen	mg/l	6.6	6.8	<10	
11	Faecal Coliform	MPN/100ml	33	33	<100	

Pr.T. Sty Phy Env. Sc.

Authorked Signator

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#### Report no. - CEMC/TDPCL/030418/A1

Issued Date-03.04.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03042018A1
Nature of Sampling	Ambient Air Sample
Sampling Location	Colony Area
Sampling By	Mr. Suryakanti Sen
Sampling Duration	01.03.2018 to 31.03.2018

'. 1	Date	ΡM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	$\frac{SO_2}{(\mu g/m^3)}$	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (µg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Рb (µg/m³)	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (μg/m <sup>3</sup> )	
Ċ	01.03.2018	62.3	31.2	7.4	12.8	0.3	<20	<10	< 0.06	<0.6	<0.44	<1	<1
1	05.03.2018	59.7	30.8	7.1	12.4	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
L.	08.03.2018	57.9	29.8	6.9	12.2	0.4	<20	<10	< 0.06	<0.6	<0.44	<1	<1
	15.03.2018	61.4	34.2	7.3	12.5	0.3	<20	<10	< 0.06	<0.6	<0.44	<1	<1
ı	19.03.2018	58.1	32.3	7.0	12.7	0.4	<20	<10	< 0.06	<0.6	<0.44	<1	<1
	22.03.2018	58.9	34.7	7.1	12.1	0.3	<20	<10	< 0.06	<0.6	<0.44	<1	<1
n,	26.03.2018	61.8	35.4	7.4	12.7	0.4	<20	<10	<0.06	<0.6	<0.44	<1	<1
	29.03.2018	63.2	35.9	7.6	12.8	0.4	<20	<10	< 0.06	<0.6	<0.44	<1	<1
(	NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
,	Methods of Analysis	IS: 5182 (Part- 23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-9)	(	followed	As per CPCB method followed by AAS	15: 5182 (Part-	IS: 5182 (Part- 12)

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

### Dr.T. Sala Env. Sc. Authorized Signa (1) 57 (0AZETTE No-1357, DI-03-06-2016)



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Report no. - CEMC/TDPCL/030418/A2

Issued Date-03.04.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03042018A2
Nature of Sampling	Ambient Air Sample
Sampling Location	Kanakaprasad Village
Sampling By	Mr. Suryakanti Sen
Sampling Duration	01.03.2018 to 31.03.2018

Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO2 (µg/m3)	NOx (µg/m3)	CO (mg/m3)	NH3 (µg/m3)	О3 (µg/m3)	Рb (µg/m3)	Ni (ng/m3)	As (ng/m3)	Benzene (µg/m3)	BaP (ng/m3)
01.03.2018	57.4	34.7	7.2	12.7	0.4	<20	<10	<0.06	<0.6	<0.44	<1	<1
05.03.2018	61.3	35.5	7.4	12.4	0.3	<20	<10	< 0.06	<0.6	<0.44	<1	<1
08.03.2018	59.8	35.1	7.3	12.2	0.4	<20	<10	<0.06	<0.6	<0.44	<1	<1
15.03.2018	62.7	36.3	7.4	12.6	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
19.03.2018	57.3	29.9	7.2	12.1	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
22.03.2018	56.1	29.2	7.3	12.5	0.4	<20	<10	< 0.06	<0.6	<0.44	<1	<1
26.03.2018	61.5	35.3	7.4	12.7	0.4	<20	<10	< 0.06	<0.6	<0.44	<1	<1
29.03.2018	58.9	35.2	7.3	12.4	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)		IS: 5182		IS: 5182 (Part-10)	Indophen ols Blue 'Method followed by CPCB	IS: 5182 (Part-9)	IS: 5182 (Part- 22)	As per CPCB method followe d by AAS		IS: 5182 (Part-11)	

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

### Dr.T. Sther Rho. Env. Sc.



- Authorized Signations T (GAZEPTES:No. 1817 U1-03-06-2015) The result given above related to the tested sample, as received. The outstomer asked for the above test only.
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Report no. - CEMC/TDPCL/030418/A3

Issued Date-03.04.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03042018A3
Nature of Sampling	Ambient Air Sample
Sampling Location	Near BMH
Sampling By	Mr. Suryakanti Sen
Sampling Duration	01.03.2018 to 31.03.2018

 	Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	$SO_2$ ( $\mu g/m^3$ )	NOx (μg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m³)	Ni (ng/m³)	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m <sup>3</sup> )
ļ	01.03.2018	61.7	35.4	7.3	13.2	0.4	<20	<10	<0.06	<0.6	<0.44	<1	<1
`	05.03.2018	59.1	33.5	7.4	12.8	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
	08.03.2018	62.6	35.7	7.7	13.1	0.4	<20	<10	< 0.06	<0.6	<0.44	<1	<1
۲ I	15.03.2018	60.8	32.5	7.5	13.3	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
	19.03.2018	56.4	28.3	7.2	12.9	0.4	<20	<10	< 0.06	<0.6	<0.44	<1	<1
' '	22.03.2018	54.9	27.1	7.1	12.7	0.4	<20	<10	< 0.06	<0.6	<0.44	<1	<1
	26.03.2018	57.4	31.5	7.4	13.1	0.4	<20	<10	< 0.06	<0.6	< 0.44	<1	<1
	29.03.2018	59.2	33.6	7.9	13.0	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
,	NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Ì	4	IS: 5182 (Part-23)	as per CPCB	IS: 5182	IS: 5182 (Part-6)	IS: 5182 (Part	ivietnoa	IS: 5182	IS: 5182 (Part-22)			IS: 5182 (Part-11)	IS: 5182 (Part- 12)
			method				CPCB			AAS	AAS		

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

Dr.T. Fabur Fild Env. Sc.



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Report no. - CEMC/TDPCL/030418/A4

Issued Date-03.04.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03042018A4
Nature of Sampling	Ambient Air Sample
Sampling Location	Near Jetty
Sampling By	Mr. Suryakanti Sen
Sampling Duration	01.03.2018 to 31.03.2018

	PM10	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx	CO	NH <sub>3</sub>	03	Pb	Ni	As	Benzene	
Date	(μg/m <sup>3</sup> )	(µg/m³)	(µg/ու <sup>3</sup> )	(µg/m³)	(mg/m <sup>3</sup> )	(µg/m <sup>3</sup> )	(µg/m³)	$(\mu g/m^3)$	(ng/m <sup>3</sup> )	(ng/m³	$(\mu g/m^3)$	(ng/m³)
										_)		
01.03.2018	82.3	42.2	7.4	13.3	0.4	<20	<10	<0.06	<0.6	< 0.44	<1	<1
05.03.2018	81.6	41.8	7.2	13.1	0.4	<20	<10	<0.06	<0.6	<0.44	<1	<1
08.03.2018	82.9	40.7	7.5	12.8	0.4	<20	<10	< 0.06	<0.6	<0.44	<1	<1
15.03.2018	82.7	42.4	7.3	13.1	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
19.03.2018	74.9	37.1	7.5	12.9	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
22.03.2018	71.7	36.4	7.4	12.8	0.4	<20	<10	<0.06	<0.6	<0.44	<1	<1
26,03.2018	78.1	39.3	7.2	12.6	0.3	<20	<10	<0.06	<0.6	< 0.44	<1	<1
29.03.2018	80.8	40.3	7.8	13.0	0.3	<20	<10	< 0.06	<0.6	< 0.44	<1	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetri c Method as per CPCB method	IS: 5182	IS: 5182 (Part-6)	(Part 10)	Niernan	18: 5182	IS: 5182 (Part-22)	As per CPCB method followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182	IS: 5182 (Part- 12)

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

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Report no. - CEMC/TDPCL/030418/A5

Issued Date-03.04.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03042018A5
Nature of Sampling	Ambient Air Sample
Sampling Location	Dosinga Village
Sampling By	Mr. Suryakanti Sen
Sampling Duration	01.03.2018 to 31.03.2018

Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (µg/m <sup>3</sup> )	O <sub>3</sub> (µg/m <sup>3</sup> )	Pb (µg/m³)	Ni (ng/m <sup>3</sup> )	As (ng/m <sup>3</sup> )	Benzene (µg/m <sup>3</sup> )	BaP (ng/m
							-10					
01.03.2018	61.4	31.2	7.5	13.1	0.4	<20	<10	<0.06	<0.6	<0.44	<1	<1
05.03.2018	59.8	30.7	7.3	12.8	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
08.03.2018	62.1	32.4	7.7	13.2	0.4	<20	<10	<0.06	<0.6	<0.44	<1	<1
15.03.2018	60.9	31.8	7.5	13.0	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
19.03.2018	56.4	29.1	7.3	12.8	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
22,03,2018	54.2	28.3	7.3	12.7	0.4	<20	<10	< 0.06	<0.6	<0.44	<1	<1
26.03.2018	56.1	29.7	7.4	13.1	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
29.03.2018	58.4	29.7	7.6	12.2	0.4	<20	<10	<0.06	<0.6	<0.44	<1	<1
NAAQ* Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetri c Method as per CPCB method	IS: 5182			Indophe nols Blue Method followed by CPCB	IS: 5182				IS: 5182 (Part- 11)	IS: 5182 (Part 12)

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

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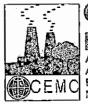


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Report no. - CEMC/TDPCL/030418/A6

Issued Date-03.04.2018

### AMBIENT AIR QUALITY MONITORING TEST REPORT

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Reference No.	CEMC-03042018A6
Nature of Sampling	Ambient Air Sample
Sampling Location	Bhitarkanika (Eco Sensitive)
Sampling By	Mr. Suryakanti Sen
Sampling Duration	01.03.2018 to 31.03.2018

Date	PM <sub>10</sub> (μg/m <sup>3</sup> )	РМ <sub>2.5</sub> (µg/m <sup>3</sup> )	SO <sub>2</sub> (μg/m <sup>3</sup> )	NOx (µg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	NH <sub>3</sub> (μg/m <sup>3</sup> )	Ο <sub>3</sub> (μg/m <sup>3</sup> )	Pb (µg/m³)	Ni (ng/m³)	As (ng/m <sup>3</sup> )	Benzene (μg/m³)	
01.02.0010	50.6			10.0								
01.03.2018	50.6	27.3	6.8	10.9	0.3	<20	<10	< 0.06	<0.6	<0.44	<1	<1
05.03.2018	49.7	25.6	7.0	11.1	0.2	<20	<10	<0.06	<0.6	<0.44	<1	<1
08.03.2018	51.1	25.9	6.9	10.8	0.2	<20	<10	<0.06	<0.6	<0.44	<1	<1
15.03.2018	47.8	24.3	7.6	11.2	0.3	<20	<10	< 0.06	<0.6	< 0.44	<1	<1
19.03.2018	45.2	23.3	7.7	11.9	0.2	<20	<10	< 0.06	<0.6	<0.44	<1	<1
22.03.2018	42.5	22.9	7.3	11.1	0.3	<20	<10	<0.06	<0.6	< 0.44	<1	<1
26.03.2018	47.6	24.5	6.6	11.1	0.3	<20	<10	< 0.06	<0.6	<0.44	<1	<1
29.03.2018	50.4	26.5	7.3	11.2	0.3	<20	<10	<0.06	<0.6	<0.44	<1	<1
NAAQ Standard	100	60	80	80	4	400	100	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetri c Method as per CPCB method				Indophe not Blue Method followed by CPCB				CPCB method	1S: 5182 (Part- 11)	IS: 5182 (Part- 12)

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

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### Report no. - CEMC/TDPCL/030418/N

#### Issued Date-03.04.2018

#### **NOISE LEVEL MONITORING REPORT**

Client Name & Address	M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
Work Order No.	4800026792, dtd-22.07.2017
Analysis No.	CEMC/TDPCL-D00N1
Nature of Sampling	Noise Sample
Sampling By	Mr. Suryakanti Sen
Sampling Date	01.03.2018 to 31.03.2018

Date	Location	NL I	)ay Time dI	B (A)	NL Night Time dB (A)			
Date	Location	Max	Min.	Avg.	Max.	Min.	Avg.	
17.03.2018	Colony Area (R)	54.3	52.1	53.2	44.1	39.5	41.8	
06.03.2018	Kanakaprasad Village (R)	53.8	50.4	52.1	43.3	38.6	40.9	
23.03.2018	Near BMH (I)	73.1	69.2	71.1	68.7	65.3	67.0	
20.03.2018	Near Jetty (I)	72.6	54.9	63.7	69.4	61.8	65.6	
09.03.2018	Dosinga village (R)	53.4	48.9	51.1	42.8	39.1	40.9	
14.03.2018	Bhitarkanika (R)	50.7	41.2	45.9	42.6	37.9	40.2	

\*NL- Noise Level, I- Industrial, R- Residential

#### National Standard of Noise Level

Area	Cotogo - v of A rea/Zona	Permissible Limit in dB (A).				
Code	ode Category of Area/Zone	Day Time	Night Time			
A	Industrial Area	75	70			
В	Commercial Area	65	55			
C	Residential Area	55	45			
D	Silence Zone	50	40			

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Report no. - CEMC/TDPCL/030418/W1

Issued Date-03.04.2018

### STP TEST REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code Reference Number : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
: 4800026792, dtd-22.07.2017
: Mr. Suryakanti Sen
: 09.03.2018 & 23.03.2018
: 10.03.2018 & 24.03.2018
: APHA 23<sup>rd</sup> Edition
: Waste Water
: 1.0 Ltr each
: STP - 15 KLD (Inlet)

: CEMC-03042018W1

### STP INLET ANALYSIS RESULT

SI.		Unit of	Re	sult	
No.	Parameter	Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design parameter for Raw Sewage
1	Appearance		Turbid	Turbid	-
2	Colour		Blackish	Blackish	-
3	Odour		Foul	Foul	-
4	pH Value @ 25°C		6.69	7.06	6.0-8.5
5	Total Suspended Solids	mg/l	117.3	132.7	1000
6	B.O.D for 3 days @ 27°C	mg/l	240	260	300-350
7	Oil & Grease	mg/l	<5	<5	100
8	COD	mg/l	520	540	
9	Ammonical Nitrogen	mg/l	5.3	6.1	
10	Total Nitrogen	mg/i	35.3	41.2	
11	Faecal Coliform	MPN/100ml	1600	1600	

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#### Report no. - CEMC/TDPCL/030418/W2

Issued Date-03.04.2018

### STP TEST REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code Reference Number : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak
: 4800026792, dtd-22.07.2017
: Mr. Suryakanti Sen
: 09.03.2018 & 23.03.2018
: 10.03.2018 & 24.03.2018

- : APHA 23rd Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 15 KLD (Outlet)
- : CEMC-03042018W2
- . Clanic=05042018 W 2

### STP OUTLET ANALYSIS RESULT

CI		IT-it of	Res	ult	Stondards for New STR
Sl. No.	Parameter	Unit of Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Standards for New STPs Design after notification 2015
1	Appearance		Clear	Clear	-
2	Colour		Colorless	Colorless	-
3	Odour		Odourless	Odourless	-
4	pH Value @ 25°C		7.31	7.28	6.5-9.0
5	Total Suspended Solids	mg/l	16.3	13.2	<20
6	B.O.D for 3 days @ 27°C	mg/l	8.5	8.3	<10
7	Oil & Grease	mg/l	<5	<5	
8	COD	mg/l	24	20	<50
9	Ammonical Nitrogen	mg/l	0.9	1.3	<5
10	Total Nitrogen	mg/l	7.1	8.1	<10
11	Faecal Coliform	MPN/100ml	21	26	<100

DATASAL Env. Sc. Notes Govi. St



(GAZEDTE The result given 3b06c20 bod to the tested sample, as received. The customer asked for the above test only.

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Report no. - CEMC/TDPCL/030418/W3

Issued Date-03.04.2018

### STP TEST REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure Sample Description Sample Quantity Sample Location with Job Code Reference Number : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak : 4800026792, dtd-22.07.2017 : Mr. Suryakanti Sen : 09.03.2018 & 23.03.2018 : 10.03.2018 & 24.03.2018

- : APHA 23rd Edition
- : Waste Water
- : 1.0 Ltr each
- : STP 140 KLD (Inlet)
- : CEMC-03042018W3

### STP INLET ANALYSIS RESULT

SI.		Unit of	Res	sult	Design parameter for Raw
No.	Parameter	Measurement	lst Fortnight	2nd Fortnight	Sewage
1	Appearance		Turbid	Turbid	-
2	Colour		Blackish	Blackish	-
3	Odour		Foul	Foul	-
4	pH Value @ 25°C		6.91	6.98	6.0-8.5
5	Total Suspended Solids	mg/l	127.9	138.2	1000
6	B.O.D for 3 days @ 27°C	mg/l	220	230	300-350
7	Oil & Grease	mg/l	7.9	8.4	100
8	COD	mg/l	780	810	
9	Ammonical Nitrogen	mg/l	8.3	8.5	
10	Total Nitrogen	mg/l	32.6	29.7	
11	Faecal Coliform MPN/100ml		>1600	>1600	

Env. Sc. Dr. Auth Notes: 312



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Report no. - CEMC/TDPCL/030418/W4

Issued Date-03.04.2018

### STP TEST REPORT

Name & Address of the Customer

Work order No. Sampling by Date of Sampling Date of Receiving Sampling & Testing Procedure **Sample Description** Sample Quantity Sample Location with Job Code **Reference Number** 

: M/s. The Dhamra Port Company Ltd., Dosinga, **Bhadrak** : 4800026792, dtd-22.07.2017 : Mr. Suryakanti Sen : 09.03.2018 & 23.03.2018 : 10.03.2018 & 24.03.2018 : APHA 23rd Edition : Waste Water : 1.0 Ltr each : STP - 140 KLD (Outlet) : CEMC-03042018W4

### STP OUTLET ANALYSIS RESULT

SI.		Unit of	Res	ult	Standards for New STPs
SI. No.	Parameter	Measurement	1 <sup>st</sup> Fortnight	2 <sup>nd</sup> Fortnight	Design after notification 2015
1	Appearance		Clear	Clear	-
2	Colour		Colorless	Colorless	-
3	Odour		Odourless	Odourless	
4	pH Value @ 25°C		7.31	7.29	6.5-9.0
5	Total Suspended Solids	mg/l	12.9	13.3	<20
6	B.O.D for 3 days @ 27°C	mg/l	8.8	8.6	<10
7	Oil & Grease	mg/l	<5	<5	
8	COD	mg/l	30	28	<50
9	Ammonical Nitrogen	mg/l	1.1	1.3	<5
10	Total Nitrogen	mg/l	6.9	6.8	<10
11	Faecal Coliform	MPN/100ml	21	26	<100

Env. Sc. Dr.Anthin Notes: Notes:



- (GAZETTE The result Biver above related to the tested sample, as deceived. The oustomer asked for the above test only. This Test Report shall not be reproduced wholly or in participation written consent of the laboratory. The samples received shall be destroyed after two weeks from the date of issue of the Test Report unless
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Laboratory At: Plot No. 800/1274, Johal, Pahal, Bhubaneswar-752101,

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Report no. - CEMC/TDPCL/030418/W

Issued Date-03.04.2018

### SEA WATER ANALYSIS REPORT

Name & Address of the Customer

Work order No. Date of Sampling Sampling by Sample Description : M/s. The Dhamra Port Company Ltd., Dosinga, Bhadrak

- : 4800026792, dtd-22.07.2017
- : 03.03.2018
- : Bikash Samantaray & Santosh Mohanty
- : Sea Water

#### STATION DESCRIPTION

SL. NO.	STATION	Sample Location	GPS COORDINATES
01	STATION-1	Dhamra river mouth	20°47'04.42" N
01	STATION-1	Dhanifa nver mouth	86°57'32.86'' E
02	STATION-2	Dry bulk cargo birth face	20°48'58.90" N
02	STATION-2	Dry burk eargo birth face	86°58'08.17" E
03	03 STATION-3	Liquid/Gas cargo birth face	20°50'21.05" N
05	STATION-5	Equility Gas cargo birtin face	86°58'25.06'' E
04	STATION-4	Along channel at 4 km	20°50'55.41" N
04	STATION-4	Along channel at 4 km	86°59'19.02'' E
05	STATION-5	Along channel at 8 km	20°52'48.18" N
05	STATION-5	Along channel at 8 km	87°01'03.53" E
06	STATION-6	Along channel at 12 km	20°55'06.29 N
00	STATION-0	Along channel at 12 km	87°02'18.56'' E
07	STATION-7	Dragging dumping site inside sea	20°50'02.19" N
07	STATION-/	Dragging dumping site inside sea	86°58'21.08'' E
08	STATION-8	Near Kanika Island	20°49'39.68" N
00	STATION-0	istai Kanika Island	86°59'04.56'' E

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Report no. - CEMC/TDPCL/030418/W

Issued Date-03.04.2018

SEA	WATER	ANALYSIS	REPORT

			WA	TER ANALYSIS	DATA				
Locations		Temp. (°C)	Turbidity (NTU)	Conductivity (µS/cm)	pН	Salinity (ppt)	DO (mg/l)	BOD (mg/l)	COD (mg/l)
Station-1	SW	28	28	9860	8.1	27.35	7.7	3.0	24
Station-1	BW	22	25	9910	7.7	29.12	6.5	3.4	21
Station-2	SW	29	22	14360	8.3	28.41	6.6	3.2	26
Station-2	BW	21	31	14540	7.5	29.66	6.8	3.4	20
Station-3	SW	29	23	13630	8.0	24.40	7.3	2.2	26
Station-5	BW	21	41	14180	7.8	29.82	6.3	2.6	22
Station-4	SW	29	23	13850	8.2	27.56	7.6	2.9	32
Station-4	BW	22	32	13900	7.2	29.32	6.2	3.1	28
Station-5	SW	28	21	12280	8.3	27.51	6.8	3.2	36
Station-5	BW	22	44	12430	7.5	29.51	6.7	3.1	34
Station-6	SW	28	25	9120	8.1	27.42	7.4	3.6	32
Station-0	BW	21	29	9450	7.4	29.22	6.5	3.5	30
Station-7	SW	29	27	12640	8.3	27.53	7.6	3.2	38
Station-/	BW	22	47	12840	7.2	29.32	6.5	3.1	36
Station-8	SW	28	21	9920	8.0	27.56	6.7	3.0	38
StatiOII-8	BW	22	56	9870	7.5	29.35	6.8	2.7	40

\*SW= Surface Water, BW= Bottom Water

			V	VATER ANA	LYSIS DATA				
Locatio	ns	Copper (mg/l)	Cadmium (mg/l)	Mercury (mg/l)	Phosphate (mg/l)	Sulphate (mg/l)	Nitrite (mg/l)	Nitrate (mg/l)	TSS (mg/l)
Station-1	SW	< 0.03	< 0.01	< 0.001	< 0.05	1701	0.24	7.5	184.5
Station-1	BW	< 0.03	< 0.01	< 0.001	< 0.05	1900	0.42	13.8	358.1
Station-2	SW	< 0.03	< 0.01	< 0.001	< 0.05	1690	0.09	6.5	202.9
Station-2	BW	< 0.03	< 0.01	< 0.001	< 0.05	1933	0.35	15.7	319.8
Station-3	SW	< 0.03	< 0.01	< 0.001	< 0.05	1730	0.12	8.3	251.3
Station-5	BW	< 0.03	< 0.01	< 0.001	< 0.05	1897	0.38	14.2	442.0
Station-4	SW	< 0.03	< 0.01	< 0.001	< 0.05	1720	0.36	8.1	198.5
Station-4	BW	< 0.03	< 0.01	< 0.001	< 0.05	1932	0.42	13.4	510.8
Station-5	SW	< 0.03	< 0.01	< 0.001	< 0.05	1670	0.14	7.5	244.5
Station-5	BW	< 0.03	< 0.01	< 0.001	< 0.05	1874	0.34	12.9	452.2
Station-6	SW	< 0.03	< 0.01	< 0.001	< 0.05	1700	0.24	6.4	215.8
Station-0	BW	< 0.03	< 0.01	< 0.001	< 0.05	1911	0.32	14.3	477.0
Station-7	SW	< 0.03	< 0.01	< 0.001	< 0.05	1680	0.25	5.6	210.5
Station-7	BW	< 0.03	< 0.01	< 0.001	< 0.05	1878	0.45	15.1	380.2
Station-8	SW	< 0.03	< 0.01	< 0.001	< 0.05	1730	0.17	7.8	256.2
Station-8	BW	< 0.03	< 0.01	< 0.001	< 0.05	1938	0.36	12.3	420.3

\*SW= Surface Water, BW= Bottom Water v. Sc. Govi 2444

(GAAuthorized Signatory03-06-2016)



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#### Report no. - CEMC/TDPCL/030418/W

Issued Date-03.04.2018

	<u>SEA WATER ANALYSIS REPORT</u> WATER ANALYSIS DATA									
Locatio	ons	Calcium Hardness (mg/l)	Magnesium Hardness (mg/l)	Total Hardness (mg/l)	Total Dissolved Solids (mg/l)	Ammonical Nitrogen (mg/l)	Total Nitrogen (mg/l)			
Station-1	SW	2163.0	927.0	3090	6409.8	ND	12.4			
Station-1	BW	2248.4	963.6	3212	6441.5	ND	16.9			
Station-2	SW	4264.4	1827.6	6092	9334.1	ND	13.8			
	BW	4331.6	1856.4	6188	9451.6	ND	18.4			
	SW	4240.6	1817.4	6058	8859.5	ND	14.4			
Station-3	BW	4341.4	1860.6	6202	9217.4	ND	17.8			
	SW	4240.6	1817.4	6058	9002.5	ND	13.7			
Station-4	BW	4328.8	1855.2	6184	9035.1	ND	16.8			
G:	SW	4195.8	1798.2	5994	7982.6	ND	12.5			
Station-5	BW	4250.4	1821.6	6072	8079.5	ND	17.4			
Station (	SW	2038.4	873.6	2912	5928.0	ND	12.9			
Station-6	BW	2097.2	898.8	2996	6142.5	ND	15.9			
Station 7	SW	2101.4	900.6	3002	8216.3	ND	11.1			
Station-7	BW	2301.6	986.4	3288	8346.4	ND	13.5			
Station 9	SW	2108.4	903.6	3012	6448.9	ND	12.7			
Station-8	BW	2219.0	951.0	3170	6415.5	ND	12.7			

\*SW= Surface Water, BW= Bottom Water

			WATE	R ANALYSIS DAT	Γ <b>A</b>		
Locatio	ns	Total Chromium (mg/l)	Phenolic Compounds (mg/l)	Hexavalent Chromium (mg/l)	Petroleum Hydrocarbon (mg/l)	Chlorinity (°/ <sub>00</sub> )	Oil and Grease (mg/l)
Station-1	SW	< 0.05	< 0.001	< 0.05	0.5	12.32	5.2
Station-1	BW	< 0.05	< 0.001	< 0.05	ND	14.56	ND
Station-2	SW	< 0.05	< 0.001	< 0.05	0.6	12.58	6.2
Station-2	BW	< 0.05	< 0.001	< 0.05	ND	14.86	ND
Station-3	SW	< 0.05	< 0.001	< 0.05	1.1	12.18	6.8
Station-5	BW	< 0.05	< 0.001	< 0.05	ND	14.75	ND
Station-4	SW	< 0.05	< 0.001	< 0.05	0.9	12.54	5.6
Station-4	BW	< 0.05	< 0.001	< 0.05	ND	15.13	ND
Station 5	SW	< 0.05	< 0.001	< 0.05	0.6	12.31	5.0
Station-5	BW	< 0.05	< 0.001	< 0.05	ND	14.82	ND
Station-6	SW	< 0.05	< 0.001	< 0.05	0.8	12.57	6.4
Station-0	BW	< 0.05	< 0.001	< 0.05	ND	14.65	ND
Station-7	SW	< 0.05	< 0.001	< 0.05	0.1	13.10	7.1
Station-7	BW	< 0.05	< 0.001	< 0.05	ND	14.21	ND
Station 9	SW	< 0.05	< 0.001	< 0.05	0.6	12.82	6.3
Station-8	BW	< 0.05	< 0.001	< 0.05	SND	14.52	ND
		r, BW= Bottom		5 Enviror	mental		

Dr.I. Saturde Env. Sc. Authorized Signatory (GAZETTE No-1357, Dt-03-06-2016)



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Report no. - CEMC/TDPCL/030418/W

Issued Date-03.04.2018

#### SEA WATER ANALYSIS REPORT

			РНҮТО	PLANKTON MO	ONITORING DATA
Locations		Total Count/L	No. of Species	Chlorophyll- a (µg/L)	Major Species
Station-	SW	1701	11	1.6538	C.pentagonum, Skeletonema, N.longisigma, C.furca, Bacillaria
1	BW	1586	07	1.3189	C.pentagonum, Skeletonema, N.longisigma, C.furca, Bacillaria
Station-	SW	4892	17	1.9550	C.pentagonu, Bacillaria, Podosira
2	BW	4032	10	1.6298	C.pentagonu, Bacillaria, Podosira
Station-	SW	7567	20	2.5021	C.pentagonum, N.striata, C.furca
3	BW	7135	12	2.2398	C.pentagonum, N.striata, C.furca
Station-	SW	3394	14	1.5632	C.pentagonum, Chaetocerous, Bacillaria
4	BW	3032	08	1.3789	C.pentagonum, Chaetocerous, Bacillaria
Station-	SW	1012	08	0.8674	Bacillaria, Chaetocerous, Ceratium,
5	BW	785	03	0.6951	Bacillaria, Chaetocerous, Ceratium,
Station-	SW	1356	11	1.2385	Podosira , C.pentagonum, Bacillaria
6	BW	1032	09	1.0539	Podosira, C.pentagonum, Bacillaria
Station-	SW	1843	15	1.3591	C.pentagonum, Pleurosigma,
7	BW	1531	08	1.1165	C.pentagonum, Pleurosigma,
Station-	SW	1136	13	1.0192	Pleurosigma, N.longisigma, Podosira
8	BW	951	06	1.0021	Pleurosigma, N.longisigma, Podosira

\*SW= Surface Water, BW= Bottom Water.

ZOOPLANKTON MONITORING DATA								
Locations		Total Count/L No. of Species		Major Species				
Station-1	SW	1356	19	Rotifera, Protoza, Nematoda				
	BW	1101	10	Rotifera, Protoza, Nematoda				
Station-2	SW	1236	15	Anostraca, Cladocera,				
Station-2	BW	1032	09	Anostraca, Cladocera,				
Station-3	SW	2832	29	Protozoa, Nematoda, Rotifera				
Station-5	BW	2465	20	Protozoa, Nematoda, Rotifera				
Station-4	SW	2156	26	Cladocera, Nematoda				
Station-4	BW	1975	16	Cladocera, Nematoda				
Station-5	SW	1326	18	Crustacean Larvae, Protozoa, Nematoda				
Station-5	BW	1032	11	Crustacean Larvae, Protozoa, Nematoda				
Station-6	SW	1098	15	Ostracoda, Protozoa, Copepod, Rotifera				
Station-0	BW	1009	07	Ostracoda, Protozoa, Copepod, Rotifera				
Station-7	SW	1024	09	Copepod, Rotifera				
Station-7	BW	865	04	Copepod, Rotifera				
Station-8	SW	1056	17	Protozoa, Rotifera, Nematoda				
o - t	BWD	A 995	08	Protozoa, Rotifera, Nematoda				
GOVE Surface Water BW = Bottom Water GOVE ST GAZETTE No-1357, Dt-03-06-2016) Authorized Signatory				Seal of Laboratory				

Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

Regd. Office: 1<sup>st</sup> Floor, N-5/305, IRC village, Nayapalli, Bhubaneswar-751015, Odisha, India, Mobile: 9861032826 E-mail- cemc\_consultancy@yahoo.co.in, cemc122@gmail.com, website: www.cemc.in, Landline: 0674-2360344.

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Report no. - CEMC/TDPCL/030418/W

Issued Date-03.04.2018

#### SEA WATER ANALYSIS REPORT

MICROBIOLOGICAL MONITORING DATA									
Locations		Total Bacterial Count (CFU/ml)	Total Coliform (CFU/ml)	Faecal Coliform (CFU/ml)	<i>E.coli</i> (CFU/ml)				
Station-	SW	280	58	3.6	ND				
1	BW	320	58	3.6	ND				
Station-	SW	170	34	1.8	ND				
2	BW	190	17	1.8	ND				
Station-	SW	540	70	10	ND				
3	BW	280	63	5.5	ND				
Station-	SW	140	22	3.6	ND				
4	BW	390	17	2.0	ND				
Station-	SW	110	14	<1.8	ND				
5	BW	150	25	1.8	ND				
Station-	SW	240	52	4.0	ND				
6	BW	250	10	<1.8	ND				
Station-	SW	120	23	2.0	ND				
7	BW	320	94	6.8	ND				
Station-	SW	150	34	3.7	ND				
8	BW	190	34	3.7	ND				

\*SW= Surface Water, BW= Bottom Water

	MICROBIOLOGICAL MONITORING DATA							
Location	Locations		Salmonella (CFU/ml)	Shigella (CFU/ml)	Vibrio (CFU/ml)			
Station-1	SW	ND	ND	ND	ND			
Station-1	BW	ND	ND	ND	ND			
Station-2	SW	ND	ND	ND	ND			
Station-2	BW	ND	ND	ND	ND			
Station-3	SW	ND	ND	ND	ND			
Station-5	BW	ND	ND	ND	ND			
Station-4	SW	ND	ND	ND	ND			
Station-4	BW	ND	ND	ND	ND			
Station-5	SW	ND	ND	ND	ND			
Station-3	BW	ND	ND	ND	ND			
Station-6	SW	ND	ND	ND	ND			
Station-0	BW	ND	ND	ND	ND			
Station-7	SW	ND	ND	ND	ND			
Stauon-/	BW	ND	ND	ND	ND			
Station-8	SW	ND	ND	ND	ND			
Stauon-8	BW	ND	ND	ND	ND			

\*SW= Surface Water, BW= Bottom Water

Dr.T. Env. Sc. Authorized Signatory & ST (GAZETTE No-1357, Dt-03-06-2016)

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Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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#### Report no. - CEMC/TDPCL/030418/W

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#### SEA WATER ANALYSIS REPORT

Issued Date-03.04.2018

PRIMARY PRODUCTIVITY MONITORING DATA							
Locati	ons	Gross Primary Productivity (mgC/ L/ day)	Net Primary Productivity (mgC/ L/ day)				
Station-1	SW	2.3	1.0				
Station-1	BW	2.5	1.2				
Station-2	SW	1.7	1.1				
Station-2	BW	1.9	1.3				
Station-3	SW	1.0	0.8				
Station-5	BW	1.2	0.9				
Station 1	SW	1.9	0.8				
Station-4	BW	2.1	1.1				
Station 5	SW	1.2	0.9				
Station-5	BW	1.8	1.3				
Station 6	SW	1.5	1.0				
Station-6	BW	1.9	1.1				
Station 7	SW	1.8	0.9				
Station-7	BW	2.2	0.9				
Station 9	SW	0.9	0.8				
Station-8	BW	1.5	1.1				

\*SW= Surface Water, BW= Bottom Water

		PHY	<b>FOBENTHOS MO</b>	NITORING	DATA	
Locations		Fungus (CFU/1ml dry wt.)	Total Count/ 50g wet sediment	No. of Species	Diversity Index	Major Species
Station-1	SW	2541	135	2	0.6459	N.longsigma
Station-1	BW	2646	141	6	0.6544	Podosira
Station-2	SW	4200	225	3	0.5718	Podosira
Station-2	BW	4264	247	5	0.5815	Podosira, Ditylum
Station-3	SW	918	315	3	0.7868	Podosira
Station-5	BW	985	358	1	0.7965	Ditylum
Station-4	SW	3377	225	3	0.5623	Podosira
Station-4	BW	3244	212	2	0.5432	Ditylum
	SW	2627	225	3	0.9502	Podosira
Station-5	BW	2889	243	5	0.9645	Podosira, N.longsigma, Ditylum
	SW	5779	135	2	0.6931	Podosira
Station-6	BW	4814	147	1	0.6978	Podosira, N.longsigma
Station 7	SW	4205	1260	6	1.2126	Podosira, N.longsigma, Ditylum
Station-7	BW	4514	1114	Arnag	ine1:3695	Podosira, N.longsigma, Ditylum
Chatian 0	SW	1668	315	185	1.1846	Podosira
Station-8	BW	1774	325	5 Znyiro	men13247	Podosira
	ce Water	<b>BW</b> = Bottom Water Dt-03-06-2016)		Labo	pratory 2	
Authorized Signatory Seal of Laboratory						

Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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#### Report no. - CEMC/TDPCL/030418/W

Issued Date-03.04.2018

#### SEA WATER ANALYSIS REPORT

		TOTAL FAUNA MONITO		Total Farmer	
Locatio	ons	Name of Phylum, Class and	Total number of species	Total Fauna per	
	1	Number of individuals encountered	Encountered	m <sup>3</sup>	
		1.Phylum- Arthropoda			
	SW	Class- Malagostraca-45	71	146	
		2.Phylum- Annelida			
Station-1		Class-Polychaeta-26			
		1.Phylum- Arthropoda			
	BW	Class- Malagostraca-78	107	141	
		2.Phylum- Annelida			
		Class-Polychaeta-29			
		1.Phylum-Annelida			
	SW	Class-Polchaeta-11	13	174	
		2.Phylum-Arthropda			
Station-2		Class- Copepoda-2			
		1.Phylum-Annelida			
	BW	Class-Polchaeta-19	26	179	
		2.Phylum-Arthropda			
		Class- Copepoda-7			
	SW	1.Phylum- Arthropoda		2214	
		Class- Malagostraca-52			
		2.Phylum- Annelida	80		
		Class-Polychaeta-21	89		
		3.Phylum- Mollusca			
		Class-Gastropoda-10			
Station-3		Class- Pelecypoda-6			
		1.Phylum- Arthropoda			
		Class- Malagostraca-69		2298	
	DW	2.Phylum- Annelida	112		
	BW	Class-Polychaeta-25	112	2298	
		3.Phylum- Mollusca			
		Class-Gastropoda-12			
		Class- Pelecypoda-6			
		1.Phylum- Annelida Class-Polychaeta-21			
		2.Phylum-Mollusca			
	SW	Class-Gastropoda-2	28	395	
		Class-Pelecypoda-3			
		Class-Bivalvia-2			
Station-4		1.Phylum- Annelida			
		Class-Polychaeta-22 2.Phylum-Mollusca			
	BW	Class-Gastropoda-10	42	369	
		Class-Pelecypoda-4			
		Class-Bivalvia-6			
		1.Phylum- Anthropoda			
		Class- Amphipoda-9			
Station-5	SW	2.Phylum- Annelida	46	1025	
		Class- Polychaeta- 12			

Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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		3.Phylum- Mollusca			
		Class- Pelecypoda-4			
		Class- Bivalvia-19			
		Class- Gastropoda-2			
		1.Phylum- Anthropoda			
		Class- Amphipoda-13			
		2.Phylum- Annelida			
		Class- Polychaeta- 15			
	BW	3.Phylum- Mollusca	63	1165	
		Class- Pelecypoda-6			
		Class- Bivalvia-19			
		Class- Gastropoda-10			
		1.Phylum- Annelida			
	SW	Class- Polychaeta-39		635	
		2.Phylum- Mollusca	44		
		Class- Bivalvia-5			
Station-6	BW	1.Phylum- Annelida			
		Class- Polychaeta-39	4.4	(00	
		2.Phylum- Mollusca	44	698	
		Class- Bivalvia-5			
		1.Phylum-Annelida			
		Class- Polychaeta-39			
	SW	2.Phylum- Mollusca	54	405	
	2.00	Class- Gastropoda-6	34	495	
		Class-Bivalvia-5			
Station-7		Class- Scaphopoda-4			
Station-7		1.Phylum-Annelida			
		Class- Polychaeta-41			
	BW	2.Phylum- Mollusca	64	499	
	ВW	Class- Gastropoda-9	04	499	
		Class-Bivalvia-8			
		Class- Scaphopoda-6			
	SW	1.Phylum- Annelida	26	348	
Station-8	2.0	Class- Polychaeta-26	20	548	
Station-6	DW	1.Phylum- Annelida	25	286	
	BW	Class- Polychaeta-25	2.3	386	

\*SW= Surface Water, BW= Bottom Water

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Authorized Signatory ST (GAZETTE No-1357, DI-03-06-2016)	

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Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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#### Report no. - CEMC/TDPCL/030418/Sed

Issued Date-03.04.2018

< 3

#### SEDIMENT ANALYSIS REPORT

Name & Address of the Customer

Work order No. **Date of Sampling** Sampling by **Sample Description** 

Station-8

7.2

4.4

- : M/s. The Dhamra Port Company Ltd., Dosinga,
- Bhadrak : 4800026792, dtd-22.07.2017
- : 03.03.2018
- : Bikash Samantaray & Santosh Mohanty

4.1

19.32

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< 1

: Sediment

			SEA SEDIMEN	T ANALYSIS	REPO	<u>RT</u>			
			SEDIMENT	Γ ANALYSIS I	DATA				
Locations	pН	Organic	Moisture Content	Conductivity	Iron	Sodium	Copper	Nickel	Zinc
Locations	pm	Matter	(%)	(mS/cm)	(%)	(%)	(mg/kg)	(mg/Kg)	(mg/kg)
Station-1	6.5	4.0	5.2	5.09	4.1	23.51	< 5	< 1	< 3
Station-2	6.8	4.0	6.8	5.10	3.9	23.48	< 5	< 1	< 3
Station-3	6.7	4.1	7.4	5.07	4.0	23.51	< 5	< 1	< 3
Station-4	6.8	6.8	6.9	5.50	3.8	17.35	< 5	< 1	< 3
Station-5	6.6	6.5	4.5	5.43	3.6	17.48	< 5	< 1	< 3
Station-6	6.7	6.9	2.8	5.48	3.7	17.46	< 5	< 1	< 3
Station-7	7.2	4.8	6.3	2.31	3.9	19.76	< 5	< 1	< 3

5.9

	SEDIMENT ANALYSIS DATA								
Locations	Manganese	Lead	Boron	Phosphate	Chloride	Sulphate	Sulphide	Pesticide	Potassium
Locations	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Station-1	< 1	< 5	< 0.5	< 0.5	750	1979.7	ND	ND	0.92
Station-2	< 1	< 5	< 0.5	< 0.5	755	1983.0	ND	ND	0.90
Station-3	< 1	< 5	< 0.5	< 0.5	758	1977.3	ND	ND	0.91
Station-4	< 1	< 5	< 0.5	< 0.5	815	1802.7	ND	ND	0.89
Station-5	< 1	< 5	< 0.5	< 0.5	816	1801.9	ND	ND	0.86
Station-6	< 1	< 5	< 0.5	< 0.5	829	1802.1	ND	ND	0.87
Station-7	< 1	< 5	< 0.5	< 0.5	950	1885.1	ND	ND	0.83
Station-8	< 1	< 5	< 0.5	< 0.5	945	1883.4	ND	ND	0.81

2.29

	SEDIMENT ANALYSIS DATA								
	Total	Petroleum	Aluminiu	Total	Organic	Phosphoro	]	Fexture (%	)
Locations	Chromiu m (mg/kg)	Hydrocarb on (mg/kg)	m (mg/kg)	Nitroge n (mg/kg)	Nitrogen (mg/kg)	us (mg/kg)	Sand	Silt	Clay
Station-1	< 1	0.3	< 0.1	3.9	1.2	4.9	0.05	17.93	82.02
Station-2	< 1	0.2	< 0.1	3.4	2.3	4.2	0.44	25.01	74.55
Station-3	< 1	0.3	< 0.1	3.8	1.5	4.9	0.59	46.60	52.81
Station-4	< 1	ND	< 0.1	3.5	L. Lauem	3.7	0.09	16.83	83.06
Station-5	< 1	ND	< 0.1	3.9	0.8	\$3.5	0.54	24.89	74.45
Station-6	1	ND	< 0.1	3.2	15/1.6	3.9	1.69	45.60	51.81
Station-7	uom	En NDSc.	< 0.1	3.6	5 FAvironm	ental 424	0.07	16.95	82.56
Station-8	1. 2styla L&	ND	< 0.1	4.6	3Laborat	ory 45	1.44	24.01	73.55
(GAZETTE N	SAZETTE No-1357, DI-03-06-2016)								

#### Authorized Signatory

Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

Seal of Laboratory

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Report no. - CEMC/TDPCL/030418/Sed

Issued Date-03.04.2018

#### SEA SEDIMENT ANALYSIS REPORT

	PHYTOBENTHOS MONITORING DATA								
Locations	Fungus (CFU/1 g dry wt.)	Total Count/ 50g wet sediment	No. of Species	Diversity Index	Major Species				
Station-1	2646	141	6	0.6544	Podosira				
Station-2	4264	247	5	0.5815	Podosira, Ditylum				
Station-3	985	358	1	0.7965	Ditylum				
Station-4	3244	212	2	0.5432	Ditylum				
Station-5	2889	243	5	0.9645	Podosira, N.longsigma, Ditylum				
Station-6	4814	147	1	0.6978	Podosira, N.longsigma				
Station-7	4514	1114	4	1.3695	Podosira, N.longsigma, Ditylum				
Station-8	1774	325	7	1.3247	Podosira				

	TOTAL FAUNA MONITORING DATA						
Locations	Name of Phylum, Class and Number of individuals encountered	Total number of species Encountered	Total Fauna per m <sup>3</sup>				
Station-1	1.Phylum- Arthropoda Class- Malagostraca-78 2.Phylum- Annelida Class-Polychaeta-29	107	141				
Station-2	1.Phylum-Annelida Class-Polchaeta-19 2.Phylum-Arthropda Class- Copepoda-7	26	179				
Station-3	1.Phylum- Arthropoda Class- Malagostraca-69 2.Phylum- Annelida Class-Polychaeta-25 3.Phylum- Mollusca Class-Gastropoda-12 Class- Pelecypoda-6	112	2298				
Station-4	1.Phylum- Annelida Class-Polychaeta-22 2.Phylum-Mollusca Class-Gastropoda-10 Class-Pelecypoda-4 Class-Bivalvia-6	42	369				
Station-5	1.Phylum- Anthropoda Class- Amphipoda-13 2.Phylum- Annelida Class- Polychaeta- 15 3.Phylum- Mollusca Class- Pelecypoda-6 Class- Bivalvia-19 Class- Gastropoda-10	63	1165				

Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

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Station-6	1.Phylum- Annelida Class- Polychaeta-39 2.Phylum- Mollusca Class- Bivalvia-5	44	698
Station-7	1.Phylum-AnnelidaClass- Polychaeta-412.Phylum- MolluscaClass- Gastropoda-9Class-Bivalvia-8Class- Scaphopoda-6	64	499
Station-8	1.Phylum- Annelida Class- Polychaeta-25	25	386

Sc Authorized Signatory 3-06-2016)



Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.

# ANNEXURE - II TYPES AND QUANTITY OF FIRE EXTINGUISHERS

### The Dhamra Port Company Limited Fire Extinguisher Details

Fire         Extinguisher Details           SWITCH YARD         DCP-SKG-4nos           2         MCC -1         (CO2-4.5KG)-4nos         (CO2-3KG)-2nos, (FOAM-50ltrs)-01no           3         MCC -2         (CO2-4.5KG)-2nos         (CO2-3KG)-2nos           4         MCC -2(A)         (CO2-4.5KG)-2nos         (CO2-3KG)-2nos           4         MCC -2(A)         (CO2-4.5KG)-2nos         (CO2-3KG)-1nos           5         MCC -3         (CO2-4.5KG)-2nos         (CO2-3KG)-1nos           6         MCC -4         (CO2-4.5KG)-1no         (CO2-4.5KG)-1nos           7         TP -1(A)         CO2-4.5KG-1no         (CO2-4.5KG)-1no           10         TP -2(A)         CO2-4.5KG-1no         (CO2-4.5KG-1no           11         TP -3(A)         CO2-4.5KG-1no         (CO2-4.5KG-1no           12         TP -3(A)         CO2-4.5KG-1no         (CO2-4.5KG-1no           13         NEW TP-3         CO2-4.5KG-1no         (CO2-4.5KG-1no           14         TP -4         CO2-4.5KG-1no         (CO2-4.5KG-1no           15         TP -4(A)         CO2-4.5KG-1no         (DCP-5KG)-1nos           16         TP -5         CO2-4.5KG-1no         (DCP-5KG)-1nos           17         TP -6         CO2-4.5KG-		The Dhamra Port Company Limited						
SiNo         Location         TypeGof/Extinguishers(&Quantity)           1         SWITCH YARD         DCP-5KG-4nos           2         MCC -1         (CO2-4.5KG)-4nos           3         MCC -2         (CO2-4.5KG)-1nos           4         MCC -2(A)         (CO2-4.5KG)-1nos           5         MCC -3         (CO2-4.5KG)-1nos           6         MCC -4         (CO2-4.5KG)-1nos           7         TP - 1(A)         CO2-4.5KG-1no           8         TP - 1(A)         CO2-4.5KG-1no           9         TP - 2         CO2-4.5KG-1no           10         TP - 2(A)         CO2-4.5KG-1no           11         TP - 3         CO2-4.5KG-1no           12         TP - 3(A)         CO2 - 4.5KG-1no           13         NEW TP-3         CO2 - 4.5KG-1no           14         TP - 4         CO2 - 4.5KG-1no           15         TP - 4(A)         CO2 - 4.5KG-1no           16         TP - 5         CO2 - 4.5KG-1no           17         TP - 6         CO2 - 4.5KG-1no           18         TP-7         CO2 - 4.5KG-1no           19         TP-8         CO2 - 4.5KG-1no           21         TP-10         CO2 - 4.5KG-1no		Fire Extinguisher Details						
2         MCC -1         (CO2-4.5KG)-4nos         (CO2 -3KG)-2nos, (FOAM-50ltrs)-01no           3         MCC -2         (CO2-4.5KG)-2nos         (CO2 -3KG)-1nos         (CO2 -3KG)-1nos           4         MCC -2(A)         (CO2-4.5KG)-2nos         (CO2 -3KG)-1nos         (CO2 -3KG)-1nos           5         MCC -3         (CO2 -4.5KG)-2nos         (CO2 -3KG)-1nos         (CO2 -3KG)-1nos           6         MCC -4         (CO2-4.5KG-1no         (CO2 -4.5KG)-1nos         (DC -5KG)-1nos           7         TP -1(A)         CO2-4.5KG-1no         (DC -5KG)-1nos         (DC -4           9         TP -2         CO2-4.5KG-1no         (DC -4         (CO2 -4.5KG-1no         (DC -5KG)-1no           10         TP -2(A)         CO2 -4.5KG-1no         (DC -4         (CO2 -4.5KG-1no         (DC -5KG)-1no         (DC -4         (DC -4.5KG-1no         (DC -4         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -5KG)-1nos         (DC -4.5KG-1no         (DC -5KG)-1nos         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -5KG)-1nos         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -5KG)-1nos         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -4.5KG-1no         (DC -4	SINO		Typeof Extinguishers&Quantity					
3         MCC -2         (CO2-4.5KG)-2nos           4         MCC -2(A)         (CO2-4.5KG)-1nos         (CO2 -3KG)-1nos           5         MCC -3         (CO2-4.5KG)-2nos         (CO2 -3KG)-1nos           6         MCC -4         (CO2-4.5KG)-2nos         (CO2 -3KG)-1nos           7         TP -1(A)         CO2-4.5KG-1no         (CO2 -3KG)-1nos           7         TP -1(B)         CO2-4.5KG-1no         (CO2 -4.5KG-1no           10         TP -2         CO2-4.5KG-1no         (CO2 -4.5KG-1no           11         TP -3         CO2 -4.5KG-1no         (CO2 -4.5KG-1no           12         TP -3(A)         CO2 -4.5KG-1no         (CO2 -4.5KG-1no           13         NEW TP-3         CO2 -4.5KG-1no         (CO2 -4.5KG-1no           14         TP -4         CO2 -4.5KG-1no         (DCP - 5KG)-1nos           15         TP -4 (A)         CO2 -4.5KG-1no         (DCP - 5KG)-1nos           16         TP -7         CO2 -4.5KG-1no         (DCP - 5KG)-1nos           19         TP-8         CO2 -4.5KG-1no         (DCP - 5KG)-1nos           21         TP -10         CO2 -4.5KG-1no         (DCP - 5KG)-1nos           23         TP -12         CO2 -4.5KG-1no         (DCP - 5KG)-1no	1	SWITCH YARD	DCP-5KG-4nos					
4         MCC -2(A)         (CO2 -4.SKG)-1nos         (CO2 -3KG)-1nos           5         MCC -3         (CO2 -4.SKG)-2nos         (CO2 -3KG)-1no (FOAM-50ltrs)-01no           6         MCC -4         (CO2 -4.SKG)-1no         (CO2 -4.SKG)-1nos           7         TP -1(A)         CO2 -4.SKG-1no         (CO2 -4.SKG)-1no           8         TP -1(B)         CO2 -4.SKG-1no         (CO2 -4.SKG)-1no           10         TP -2(A)         CO2 -4.SKG-1no         (CO2 -4.SKG-1no           11         TP -3         CO2 -4.SKG-1no         (CO2 -4.SKG-1no           12         TP -3(A)         CO2 -4.SKG-1no         (CO2 -4.SKG-1no           13         NEW TP-3         CO2 -4.SKG-1no         (CO2 -4.SKG-1no           14         TP -4         CO2 -4.SKG-1no         (CO2 -4.SKG-1no           15         TP -4 (A)         CO2 -4.SKG-1no         (DCP - SKG)-1nos           16         TP -7         CO2 -4.SKG-1no         (DCP - SKG)-1nos           17         TP -6         CO2 -4.SKG-1no         (DCP - SKG)-1nos           20         TP -7         CO2 -4.SKG-1no         (DCP - SKG)-1nos           21         TP-10         CO2 -4.SKG-1no         (DCP - SKG)-1no           22         TP -11         CO2 -4.SKG-2nos DCP-	2	MCC -1	(CO2-4.5KG)-4nos (CO2 -3KG)-2nos, (FOAM-50ltrs)-01no					
5         MCC -3         (CO2 -4.SKG)-2nos         (CO2 -3KG)-1no         (FOAM-50ltrs)-01no           6         MCC -4         (CO2 -4.SKG)-02         (DCP-5KG)-1nos         7           7         TP -1(A)         CO2 -4.SKG-1no         0         DC2 -4.5KG-1no         10           8         TP -1(B)         CO2 -4.5KG-1no         10         17         -2         CO2 -4.5KG-1no           10         TP -2(A)         CO2 -4.5KG-1no         11         TP -3         CO2 -4.5KG-1no           11         TP -3(A)         CO2 -4.5KG-1no         11         14         TP -4(A)         CO2 -4.5KG-1no           13         NEW TP-3         CO2 -4.5KG-1no         11         17         TP -4(A)         CO2 -4.5KG-1no           14         TP -4         CO2 -4.5KG-1no         11         11         17         17         17         10         CO2 -4.5KG-1no         11         11         17         17         17         17         17         17         17         17         17         17         17         17         17         17         17         10         11         10         11         11         11         11         11         11         11         11         11	3	MCC-2	(CO2-4.5KG)-2nos					
6         MCC -4         (CO2 - 4.5KG)-02         (DCP - 5KG)-1nos           7         TP - 1(A)         CO2 - 4.5KG-1no         (DCP - 5KG)-1nos           8         TP - 1(B)         CO2 - 4.5KG-1no         (DCP - 5KG)-1nos           9         TP - 2         CO2 - 4.5KG-1no         (DCP - 5KG)-1no           10         TP - 2(A)         CO2 - 4.5KG-1no         (DCP - 5KG)-1no           11         TP - 3         CO2 - 4.5KG-1no         (DCP - 5KG)-1no           12         TP - 3(A)         CO2 - 4.5KG-1no         (DCP - 5KG)-1no           14         TP - 4         CO2 - 4.5KG-1no         (DCP - 5KG)-1no           15         TP - 4(A)         CO2 - 4.5KG-1no         (DCP - 5KG)-1no           16         TP - 5         CO2 - 4.5KG-1no         (DCP - 5KG)-1nos           17         TP - 6         CO2 - 4.5KG-1no         (DCP - 5KG)-1nos           18         TP-7         CO2 - 4.5KG-1no         (DCP - 5KG)-1nos           20         TP - 9         CO2 - 4.5KG-1no         (DCP - 5KG)-1nos           21         TP - 10         CO2 - 4.5KG-1no         (DCP - 5KG)-1no           23         TP - 12         CO2 - 4.5KG-1no         (D2 - 4.5KG-1no           24         TP - 13         CO2 - 4.5KG-5nos	4	MCC -2(A)	(CO2-4.5KG)-1nos (CO2 -3KG)-1nos					
7         TP - 1(A)         CO2-4.5KG-1no           8         TP - 1(B)         CO2-4.5KG-1nos           9         TP - 2         CO2-4.5KG-1no           10         TP - 2(A)         CO2-4.5KG-1no           11         TP - 3         CO2-4.5KG-1no           12         TP - 3(A)         CO2 - 4.5KG-1no           13         NEW TP-3         CO2 - 4.5KG-1no           14         TP - 4         CO2 - 4.5KG-1no           15         TP - 4 (A)         CO2 - 4.5KG-1no           16         TP - 5         CO2 - 4.5KG-1no           17         TP - 6         CO2 - 4.5KG-1no           18         TP-7         CO2 - 4.5KG-1no           19         TP-8         CO2 - 4.5KG-1no           20         TP -9         CO2 - 4.5KG-1no           21         TP-10         CO2 - 4.5KG-1no           22         TP-11         CO2 - 4.5KG-1no           23         TP - 12         CO2 - 4.5KG-1no           24         TP - 13         CO2 - 4.5KG-5nos           25         JETTY         CO2 - 4.5KG-5nos (CO2 - 3KG)-1no           27         SUL-1         CO2 - 4.5KG-6nos (DCP-5KG)-3nos           28         SUL-2         CO2 - 4.5KG-6nos (DCP-2KG)-	5	MCC -3	(CO2-4.5KG)-2nos (CO2 -3KG)-1no (FOAM-50ltrs)-01no					
8         TP - 1(B)         CO2-4.5KG-1nos           9         TP - 2         CO2-4.5KG-1no           10         TP - 2(A)         CO2-4.5KG-1no           11         TP - 3         CO2 - 4.5KG-1no           12         TP - 3(A)         CO2 - 4.5KG-1no           13         NEW TP-3         CO2 - 4.5KG-1no           14         TP - 4         CO2 - 4.5KG-1no           15         TP - 4 (A)         CO2 - 4.5KG-1no           16         TP - 5         CO2 - 4.5KG-1no           17         TP - 6         CO2 - 4.5KG-1no           18         TP-7         CO2 - 4.5KG-1no           19         TP-8         CO2 - 4.5KG-1no           20         TP-9         CO2 - 4.5KG-1no           21         TP-10         CO2 - 4.5KG-1no           22         TP-11         CO2 - 4.5KG-1no           23         TP - 12         CO2 - 4.5KG-1no           24         TP - 13         CO2 - 4.5KG-1no           25         JETTY         CO2 - 4.5KG-5nos CO2 - 3KG-1no           26         SL         CO2 - 4.5KG-5nos (CO2 - 3KG)-1no           27         SUL-1         CO2 - 4.5KG-5nos (CO2 - 3KG)-1no           28         SUL-2         CO2 - 4.5KG-6no	6	MCC -4	(CO2-4.5KG)-02 (DCP-5KG)-1nos					
9         TP - 2         CO2-4.5KG-1no           10         TP - 2(A)         CO2-4.5KG-1no           11         TP - 3         CO2 - 4.5KG-1no           12         TP - 3(A)         CO2 - 4.5KG-1no           13         NEW TP-3         CO2 - 4.5KG-1no           14         TP - 4         CO2 - 4.5KG-1no           15         TP - 4 (A)         CO2 - 4.5KG-1no           16         TP - 5         CO2 - 4.5KG-1no           17         TP - 6         CO2 - 4.5KG-1no           18         TP-7         CO2 - 4.5KG-1no           19         TP-8         CO2 - 4.5KG-1no           20         TP -9         CO2 - 4.5KG-1no           21         TP-10         CO2 - 4.5KG-1no           22         TP - 11         CO2 - 4.5KG-1no           23         TP - 12         CO2 - 4.5KG-1no           24         TP - 13         CO2 - 4.5KG-1no           25         JETTY         CO2 - 4.5KG-5nos           26         SL         CO2 - 4.5KG-5nos           27         SUL-1         CO2 - 4.5KG-5nos           28         SUL-2         CO2 - 4.5KG-5nos           29         SUL-3         CO2 - 4.5KG-6nos           30 <td>7</td> <td>TP - 1(A)</td> <td>CO2-4.5KG-1no</td>	7	TP - 1(A)	CO2-4.5KG-1no					
10         TP - 2(A)         CO2-4.5KG-1no           11         TP - 3         CO2 - 4.5KG-1no           12         TP - 3(A)         CO2 - 4.5KG-1no           13         NEW TP-3         CO2 - 4.5KG-1no           14         TP - 4         CO2 - 4.5KG-1no           15         TP - 4 (A)         CO2 - 4.5KG-1no           16         TP - 5         CO2 - 4.5KG-1no           17         TP - 6         CO2 - 4.5KG-1no           18         TP-7         CO2 - 4.5KG-1no           19         TP-8         CO2 - 4.5KG-1no           20         TP-9         CO2 - 4.5KG-1no           21         TP-10         CO2 - 4.5KG-1no           22         TP -11         CO2 - 4.5KG-1no           23         TP - 12         CO2 - 4.5KG-1no           24         TP - 13         CO2 - 4.5KG-1no           25         JETTY         CO2 - 4.5KG-1no           26         SL         CO2 - 4.5KG-5nos           27         SUL-1         CO2 - 4.5KG-5nos           28         SUL-2         CO2 - 4.5KG-5nos           29         SUL-3         CO2 - 4.5KG-6nos           30         SUL-4         CO2 - 4.5KG-6nos           31 <td>8</td> <td>TP - 1(B)</td> <td>CO2-4.5KG-1nos</td>	8	TP - 1(B)	CO2-4.5KG-1nos					
11         TP - 3         CO2 - 4.5KG-1no           12         TP - 3(A)         CO2 - 4.5KG-1no           13         NEW TP-3         CO2 - 4.5KG-1no           14         TP - 4         CO2 - 4.5KG-1no           15         TP - 4 (A)         CO2 - 4.5KG-1no           16         TP - 5         CO2 - 4.5KG-1no           17         TP - 6         CO2 - 4.5KG-1no           18         TP-7         CO2 - 4.5KG-1no           20         TP-9         CO2 - 4.5KG-1no           20         TP-9         CO2 - 4.5KG-1no           21         TP-10         CO2 - 4.5KG-1no           22         TP-11         CO2 - 4.5KG-1no           23         TP - 12         CO2 - 4.5KG-1no           24         TP - 13         CO2 - 4.5KG-1no           25         JETTY         CO2 - 4.5KG-2nos DCP-5KG-5nos           26         SL         CO2 - 4.5KG-5nos (CO2 - 3KG)-1no (DCP- 5KG)-2nos           28         SUL-1         CO2 - 4.5KG-6nos (DCP-5KG-1no           27         SUL-1         CO2 - 4.5KG-6nos (DCP-5KG)-3nos           30         SUL-2         CO2 - 4.5KG-6nos (DCP-5KG)-3no           30         SUL-3         CO2 - 4.5KG-6nos (DCP-5KG)-1no (DCP- 5KG)-2nos <tr< td=""><td>9</td><td>TP - 2</td><td>CO2-4.5KG-1no</td></tr<>	9	TP - 2	CO2-4.5KG-1no					
12         TP - 3(A)         CO2 - 4.5KG-1no           13         NEW TP-3         CO2 - 4.5KG-1no           14         TP - 4         CO2 - 4.5KG-1no           15         TP - 4 (A)         CO2 - 4.5KG-1no           16         TP - 5         CO2 - 4.5KG-1no           17         TP - 6         CO2 - 4.5KG-1no           18         TP-7         CO2 - 4.5KG-1no           19         TP-8         CO2 - 4.5KG-1no           20         TP-9         CO2 - 4.5KG-1no           21         TP-10         CO2 - 4.5KG-1no           22         TP-10         CO2 - 4.5KG-1no           23         TP - 12         CO2 - 4.5KG-1no           24         TP - 13         CO2 - 4.5KG-1no           25         JETTY         CO2 - 4.5KG-2nos DCP-5KG-5nos           26         SL         CO2 - 4.5KG-5nos (CO2 - 3KG)-1no (DCP- 5KG)-2nos           27         SUL-1         CO2 - 4.5KG-5nos (CO2 - 3KG)-1no (DCP- 5KG)-2nos           28         SUL-2         CO2 - 4.5KG-6nos (DCP-5KG-3nos           29         SUL-3         CO2 - 4.5KG-6nos (DCP-2KG)-3no           30         SUL-4         CO2 - 4.5KG-6nos (DCP-5KG)-1no (DCP- 5KG)-2nos           31         SUL-5         CO2 - 4.5KG-6nos (DCP	10	TP - 2(A)	CO2-4.5KG-1no					
13         NEW TP-3         CO2 -4.5KG-1no           14         TP - 4         CO2 -4.5KG-1no           15         TP - 4 (A)         CO2 -4.5KG-1no           16         TP - 5         CO2 -4.5KG-1no           17         TP - 6         CO2 -4.5KG-1no           18         TP-7         CO2 -4.5KG-1no           19         TP-8         CO2 -4.5KG-1no           20         TP-9         CO2 -4.5KG-1no           21         TP-10         CO2 -4.5KG-1no           22         TP-11         CO2 -4.5KG-1no           23         TP -12         CO2 -4.5KG-1no           24         TP -13         CO2 -4.5KG-1no           25         JETTY         CO2 -4.5KG-2nos DCP-5KG-5nos           26         SL         CO2 -4.5KG-4nos DCP-5KG-1no           27         SUL-1         CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos           28         SUL-2         CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos           29         SUL-3         CO2 -4.5KG-6nos (DCP-2KG)-3no           30         SUL-4         CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP- 5KG)-2nos           31         SUL-5         CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP- 5KG)-2nos           32         LIBHERR-11         CO2 -4.5KG-2no	11	TP - 3	CO2 -4.5KG-1no					
14         TP - 4         CO2 -4.5KG-1no           15         TP - 4 (A)         CO2 -4.5KG-1no           16         TP - 5         CO2 -4.5KG-1no           17         TP - 6         CO2 -4.5KG-1no           18         TP-7         CO2 -4.5KG-1no           19         TP-8         CO2 -4.5KG-1no           20         TP-9         CO2 -4.5KG-1no           21         TP-10         CO2 -4.5KG-1no           22         TP-11         CO2 -4.5KG-1no           23         TP - 12         CO2 -4.5KG-1no           24         TP - 13         CO2 -4.5KG-1no           25         JETTY         CO2 -4.5KG-1no           26         SL         CO2 -4.5KG-1no           27         SUL-1         CO2 -4.5KG-1no           28         SUL-2         CO2 -4.5KG-1no           27         SUL-1         CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP-5KG)-2nos           28         SUL-2         CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP-5KG)-2nos           29         SUL-3         CO2 -4.5KG-6nos (DCP-2KG)-3no           30         SUL-4         CO2 -4.5KG-6nos (DCP-5KG)-1no (DCP-5KG)-2nos           31         SUL-5         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no	12	TP - 3(A)	CO2 -4.5KG-1no					
15       TP - 4 (A)       CO2 -4.5KG-1no         16       TP - 5       CO2 -4.5KG-1no         17       TP - 6       CO2 -4.5KG-1no         18       TP-7       CO2 -4.5KG-1no         19       TP-8       CO2 -4.5KG-1no         20       TP-9       CO2 -4.5KG-1no         21       TP-10       CO2 -4.5KG-1no         22       TP-11       CO2 -4.5KG-1no         23       TP - 12       CO2 -4.5KG-1no         24       TP - 13       CO2 -4.5KG-1no         25       JETTY       CO2 -4.5KG-2nos DCP-5KG-5nos         26       SL       CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         27       SUI-1       CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         28       SUI-2       CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         29       SUL-3       CO2 -4.5KG-6nos (DCP-2KG)-3no         30       SUL-4       CO2 -4.5KG-6nos (DCP-2KG)-3no         31       SUL-5       CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP- 5KG)-2nos         32       LIBHERR-11       CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no         33       LIBHERR-12       CO2 -4.5KG-3nos DCP-5KG-1no         34       SILO - 1       CO2 -4.5KG-3nos DCP-5KG-1no         3	13	NEW TP-3	CO2 -4.5KG-1no					
16         TP - 5         CO2 - 4.5KG-1no           17         TP - 6         CO2 - 4.5KG-1no           18         TP-7         CO2 - 4.5KG-1nos           19         TP-8         CO2 - 4.5KG-1no           20         TP-9         CO2 - 4.5KG-1no           21         TP-10         CO2 - 4.5KG-1no           22         TP-11         CO2 - 4.5KG-1no           23         TP - 12         CO2 - 4.5KG-1no           24         TP - 13         CO2 - 4.5KG-1no           25         JETTY         CO2 - 4.5KG-2nos DCP-5KG-5nos           26         SL         CO2 - 4.5KG-4nos DCP-5KG-1no           25         JETTY         CO2 - 4.5KG-4nos DCP-5KG-1no           26         SL         CO2 - 4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos           27         SUL-1         CO2 - 4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos           28         SUL-2         CO2 - 4.5KG-5nos (DCP-2KG)-3no           30         SUL-3         CO2 - 4.5KG-6nos (DCP-2KG)-3no           31         SUL-5         CO2 - 4.5KG-6nos (DCP-5KG)-1no (DCP-5KG)-2nos           32         LIBHERR-11         CO2 - 4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no           33         LIBHERR-12         CO2 - 4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no	14	TP - 4	CO2 -4.5KG-1no					
17       TP - 6       CO2 - 4.5KG-1no         18       TP-7       CO2 - 4.5KG-1nos         19       TP-8       CO2 - 4.5KG-1no         20       TP-9       CO2 - 4.5KG-1no         21       TP-10       CO2 - 4.5KG-1no         22       TP-11       CO2 - 4.5KG-1no         23       TP - 12       CO2 - 4.5KG-1no         24       TP - 13       CO2 - 4.5KG-1no         25       JETTY       CO2 - 4.5KG-2nos DCP-5KG-5nos         26       SL       CO2 - 4.5KG-2nos DCP-5KG-1no         27       SUL-1       CO2 - 4.5KG-2nos DCP-5KG-1no         27       SUL-1       CO2 - 4.5KG-2nos DCP-5KG-1no         27       SUL-1       CO2 - 4.5KG-5nos (CO2 - 3KG)-1no (DCP- 5KG)-2nos         28       SUL-2       CO2 - 4.5KG-5nos (CO2 - 3KG)-1no (DCP- 5KG)-2nos         29       SUL-3       CO2 - 4.5KG-6nos (DCP-2KG)-1no (DCP- 5KG)-2nos         30       SUL-4       CO2 - 4.5KG-6nos (DCP-2KG)-3no         31       SUL-5       CO2 - 4.5KG-6nos (DCP-5KG)-3nos         32       LIBHERR-11       CO2 - 4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-2no         33       LIBHERR-12       CO2 - 4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no         34       SILO - 1       CO2 - 4.5KG-3	15	TP - 4 (A)	CO2 -4.5KG-1no					
18         TP-7         CO2 -4.5KG-1nos           19         TP-8         CO2 -4.5KG-1no           20         TP-9         CO2 -4.5KG-1no           21         TP-10         CO2 -4.5KG-1no           22         TP-11         CO2 -4.5KG-1no           23         TP - 12         CO2 -4.5KG-1no           24         TP - 12         CO2 -4.5KG-1no           25         JETTY         CO2 -4.5KG-1no           26         SL         CO2 -4.5KG-1no           27         SUL-1         CO2 -4.5KG-2nos DCP-5KG-5nos           26         SL         CO2 -4.5KG-4nos DCP-5KG-1no           27         SUL-1         CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP-5KG)-2nos           28         SUL-2         CO2 -4.5KG-6nos (DCP-3KG)-1no (DCP-5KG)-2nos           29         SUL-3         CO2 -4.5KG-6nos (DCP-2KG)-3no           30         SUL-4         CO2 -4.5KG-6nos (DCP-2KG)-3no           31         SUL-5         CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP-5KG)-2nos           32         LIBHERR-11         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no           33         LIBHERR-12         CO2 -4.5KG-3nos DCP-5KG-1no           34         SILO - 1         CO2 -4.5KG-3nos DCP-5KG-1no           35	16	TP - 5	CO2 -4.5KG-1no					
19         TP-8         CO2 -4.5KG-1no           20         TP-9         CO2 -4.5KG-1no         (DCP-5KG)-1nos           21         TP-10         CO2 -4.5KG-1no         (DCP-5KG)-1nos           22         TP-11         CO2 -4.5KG-1nos         (DCP-5KG)-1nos           23         TP - 12         CO2 -4.5KG-1no         (DCP-5KG)-1no           24         TP - 13         CO2 -4.5KG-1no         (DCP-5KG)-2nos           25         JETTY         CO2 -4.5KG-2nos DCP-5KG-5nos         (DCP-5KG)-2nos           26         SL         CO2 -4.5KG-4nos DCP-5KG-1no         (DCP-5KG)-2nos           27         SUL-1         CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP-5KG)-2nos         (D2 -4.5KG-5nos (CO2 -3KG)-1no (DCP-5KG)-2nos           28         SUL-2         CO2 -4.5KG-6nos (DCP-2KG)-3no         (DCP-5KG)-2nos           29         SUL-3         CO2 -4.5KG-6nos (DCP-2KG)-3no         (DCP-5KG)-2nos           31         SUL-5         CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP-5KG)-2nos         (DCP-5KG)-2nos           32         LIBHERR-11         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-2no           33         LIBHERR-12         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no           34         SILO - 1         CO2 -4.5KG-3nos DCP-5KG-1no           35	17	TP - 6	CO2 -4.5KG-1no					
20         TP-9         CO2 -4.5KG-1no         (DCP- 5KG)-1nos           21         TP-10         CO2 -4.5KG-1no         (DCP- 5KG)-1nos           22         TP-11         CO2 -4.5KG-1no         (DCP- 5KG)-1nos           23         TP - 12         CO2 -4.5KG-1no         (DCP- 5KG)-1no           24         TP - 13         CO2 -4.5KG-1no         (DCP- 5KG)-5nos           25         JETTY         CO2 -4.5KG-2nos DCP-5KG-5nos         (DCP- 5KG)-2nos           26         SL         CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         (DCP- 5KG)-2nos           27         SUL-1         CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         (DCP- 4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos           28         SUL-2         CO2 -4.5KG-6nos (DCP-2KG)-3no         (DCP- 5KG)-2nos           29         SUL-3         CO2 -4.5KG-6nos (DCP-2KG)-3no         (DCP- 5KG)-2nos           30         SUL-4         CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP-5KG)-2nos         (DCP- 4.5KG-6nos (DCP-2KG)-1no (DCP-5KG)-2nos           31         SUL-5         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no         (D2 -4.5KG-3nos DCP-5KG-1no DCP-2KG-2no DCP-2KG-1no           33         LIBHERR-11         CO2 -4.5KG-3nos DCP-5KG-1no         (D2 -4.5KG-3nos DCP-5KG-1no           34         SILO - 1         CO2 -4.5KG-3nos DCP-5K	18	TP-7	CO2 -4.5KG-1nos					
21         TP-10         CO2 -4.5KG-1no           22         TP-11         CO2 -4.5KG-1nos           23         TP - 12         CO2 -4.5KG-1no           24         TP - 13         CO2 -4.5KG-1no           25         JETTY         CO2 -4.5KG-2nos DCP-5KG-5nos           26         SL         CO2 -4.5KG-4nos DCP-5KG-1no           27         SUL-1         CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos           28         SUL-2         CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos           29         SUL-3         CO2 -4.5KG-6nos (DCP-2KG)-3no           30         SUL-4         CO2 -4.5KG-6nos (DCP-2KG)-3no           31         SUL-5         CO2 -4.5KG-6nos (DCP-2KG)-3no           32         LIBHERR-11         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no           33         LIBHERR-12         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no           34         SILO - 1         CO2 -4.5KG-3nos DCP-5KG-1no           35         SILO - 2         CO2 -4.5KG-3nos	19	TP-8	CO2 -4.5KG-1no					
22       TP-11       CO2 -4.5KG-1nos         23       TP - 12       CO2 -4.5KG-1no         24       TP - 13       CO2 -4.5KG-2nos DCP-5KG-5nos         25       JETTY       CO2 -4.5KG-2nos DCP-5KG-1no         26       SL       CO2 -4.5KG-4nos DCP-5KG-1no         27       SUL-1       CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         28       SUL-2       CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         29       SUL-3       CO2 -4.5KG-6nos (DCP-2KG)-3no         30       SUL-4       CO2 -4.5KG-6nos (DCP-5KG)-3nos         31       SUL-5       CO2 -4.5KG-6nos (DCP-5KG)-1no (DCP- 5KG)-2nos         32       LIBHERR-11       CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP- 5KG)-2nos         33       SUL-5       CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no         34       SILO - 1       CO2 -4.5KG-3nos DCP-5KG-1no         35       SILO - 2       CO2 -4.5KG-3nos	20	TP-9	CO2 -4.5KG-1no (DCP- 5KG)-1nos					
23       TP - 12       CO2 - 4.5KG-1no         24       TP - 13       CO2 - 4.5KG-1no         25       JETTY       CO2 - 4.5KG-2nos DCP-5KG-5nos         26       SL       CO2 - 4.5KG-4nos DCP-5KG-1no         27       SUL-1       CO2 - 4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         28       SUL-2       CO2 - 4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         29       SUL-3       CO2 - 4.5KG-6nos (DCP-2KG)-3no         30       SUL-4       CO2 - 4.5KG-6nos (DCP-2KG)-3nos         31       SUL-5       CO2 - 4.5KG-6nos (DCP-2KG)-1no (DCP- 5KG)-2nos         32       LIBHERR-11       CO2 - 4.5KG-6nos (DCP-2KG)-1no (DCP- 5KG)-2nos         33       SUL-5       CO2 - 4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no         34       SILO - 1       CO2 - 4.5KG-3nos DCP-5KG-1no         35       SILO - 2       CO2 - 4.5KG-3nos	21	TP-10	CO2 -4.5KG-1no					
24       TP - 13       CO2 -4.5KG-1no         25       JETTY       CO2 -4.5KG-2nos DCP-5KG-5nos         26       SL       CO2 -4.5KG-4nos DCP-5KG-1no         27       SUL-1       CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         28       SUL-2       CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         29       SUL-3       CO2 -4.5KG-6nos (DCP-2KG)-3no         30       SUL-4       CO2 -4.5KG-6nos (DCP-2KG)-3no         31       SUL-5       CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP- 5KG)-2nos         32       LIBHERR-11       CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP-5KG)-2nos         33       LIBHERR-12       CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-2no         34       SILO - 1       CO2 -4.5KG-3nos DCP-5KG-1no         35       SILO - 2       CO2 -4.5KG-3nos	22	TP-11	CO2 -4.5KG-1nos					
25       JETTY       CO2 -4.5KG-2nos DCP-5KG-5nos         26       SL       CO2 -4.5KG-4nos DCP-5KG-1no         27       SUL-1       CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         28       SUL-2       CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos         29       SUL-3       CO2 -4.5KG-6nos (DCP-2KG)-3no         30       SUL-4       CO2 -4.5KG-6nos (DCP-5KG)-1no (DCP- 5KG)-2nos         31       SUL-5       CO2 -4.5KG-6nos (DCP-2KG)-3no         32       LIBHERR-11       CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP-5KG)-2nos         33       LIBHERR-12       CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no         34       SILO - 1       CO2 -4.5KG-3nos DCP-5KG-1no         35       SILO - 2       CO2 -4.5KG-3nos	23	TP - 12	CO2 -4.5KG-1no					
26         SL         CO2 -4.5KG-4nos         DCP-5KG-1no           27         SUL-1         CO2 -4.5KG-5nos         (CO2 -3KG)-1no         (DCP- 5KG)-2nos           28         SUL-2         CO2 -4.5KG-5nos         (CO2 -3KG)-1no         (DCP- 5KG)-2nos           29         SUL-3         CO2 -4.5KG-6nos         (DCP-2KG)-3no           30         SUL-4         CO2 -4.5KG-6nos         (DCP-2KG)-3no           31         SUL-5         CO2 -4.5KG-6nos         (DCP-5KG)-2nos           32         LIBHERR-11         CO2 -4.5KG-6nos         (DCP-2KG)-1no         (DCP-5KG)-2nos           33         LIBHERR-12         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no         33         LIBHERR-12         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no           34         SILO - 1         CO2 -4.5KG-3nos         DCP-5KG-1no         35         SILO - 2         CO2 -4.5KG-3nos	24	TP - 13	CO2 -4.5KG-1no					
27         SUL-1         CO2 -4.5KG-5nos         (CO2 -3KG)-1no         (DCP- 5KG)-2nos           28         SUL-2         CO2 -4.5KG-5nos         (CO2 -3KG)-1no         (DCP- 5KG)-2nos           29         SUL-3         CO2 -4.5KG-6nos         (DCP-2KG)-3no           30         SUL-4         CO2 -4.5KG-6nos         (DCP-5KG)-3nos           31         SUL-5         CO2 -4.5KG-6nos         (DCP-5KG)-1no           32         LIBHERR-11         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no           33         LIBHERR-12         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no           34         SILO - 1         CO2 -4.5KG-3nos         DCP-5KG-1no           35         SILO - 2         CO2 -4.5KG-3nos         DCP-5KG-1no	25	JETTY	CO2 -4.5KG-2nos DCP-5KG-5nos					
28         SUL-2         CO2 -4.5KG-5nos         (CO2 -3KG)-1no         (DCP-5KG)-2nos           29         SUL-3         CO2 -4.5KG-6nos         (DCP-2KG)-3no           30         SUL-4         CO2 -4.5KG-6nos         (DCP-5KG)-3nos           31         SUL-5         CO2 -4.5KG-6nos         (DCP-5KG)-1no           32         LIBHERR-11         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no           33         LIBHERR-12         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no           34         SILO - 1         CO2 -4.5KG-3nos         DCP-5KG-1no           35         SILO - 2         CO2 -4.5KG-3nos         DCP-5KG-1no	26	SL	CO2 -4.5KG-4nos DCP-5KG-1no					
29         SUL-3         CO2 -4.5KG-6nos         (DCP-2KG)-3no           30         SUL-4         CO2 -4.5KG-6nos         (DCP-5KG)-3nos           31         SUL-5         CO2 -4.5KG-6nos         (DCP-2KG)-1no         (DCP-5KG)-2nos           32         LIBHERR-11         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no           33         LIBHERR-12         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no           34         SILO - 1         CO2 -4.5KG-3nos         DCP-5KG-1no           35         SILO - 2         CO2 -4.5KG-3nos         DCP-5KG-1no	27	SUL-1	CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos					
30         SUL-4         CO2 -4.5KG-6nos         (DCP- 5KG)-3nos           31         SUL-5         CO2 -4.5KG-6nos         (DCP-2KG)-1no         (DCP- 5KG)-2nos           32         LIBHERR-11         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no           33         LIBHERR-12         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no           34         SILO - 1         CO2 -4.5KG-3nos         DCP-5KG-1no           35         SILO - 2         CO2 -4.5KG-3nos         DCP-5KG-1no	28	SUL-2	CO2 -4.5KG-5nos (CO2 -3KG)-1no (DCP- 5KG)-2nos					
31         SUL-5         CO2 -4.5KG-6nos         (DCP-2KG)-1no         (DCP- 5KG)-2nos           32         LIBHERR-11         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no           33         LIBHERR-12         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no           34         SILO - 1         CO2 -4.5KG-3nos         DCP-5KG-1no           35         SILO - 2         CO2 -4.5KG-3nos         DCP-5KG-1no	29	SUL-3	CO2 -4.5KG-6nos (DCP-2KG)-3no					
32         LIBHERR-11         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no           33         LIBHERR-12         CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no           34         SILO - 1         CO2 -4.5KG-3nos DCP-5KG-1no           35         SILO - 2         CO2 -4.5KG-3nos	30	SUL-4	CO2 -4.5KG-6nos (DCP- 5KG)-3nos					
33         LIBHERR-12         CO2 - 4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no           34         SILO - 1         CO2 - 4.5KG-3nos         DCP-5KG-1no           35         SILO - 2         CO2 - 4.5KG-3nos         DCP-5KG-1no	31	SUL-5	CO2 -4.5KG-6nos (DCP-2KG)-1no (DCP- 5KG)-2nos					
34         SILO - 1         CO2 - 4.5KG-3nos         DCP-5KG-1no           35         SILO - 2         CO2 - 4.5KG-3nos         CO2 - 4.5KG-3nos	32	LIBHERR-11	CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-1no DCP-2KG-2no					
35 SILO - 2 CO2 - 4.5KG-3nos	33	LIBHERR-12	CO2 -4.5KG-2no, DCP-10KG-1no, DCP-5KG-2no DCP-2KG-1no					
	34	-	CO2 -4.5KG-3nos DCP-5KG-1no					
36 FIRE PUMP HOUSE CO2 -4.5KG-2nos	35	SILO - 2	CO2 -4.5KG-3nos					
	36	FIRE PUMP HOUSE	CO2 -4.5KG-2nos					

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37	WTC -1	CO2 -4.5KG-1no DCP-5KG-2Nos, CO2 -3KG-1no		
38	·	CO2 -4.5KG-1no DCP-5KG-2nos CO2 -3KG-2no		
39		CO2 -4.5KG-1nos CO2 -3KG-1no DCP-5KG-1nos		
40		CO2 -4.5KG-1no CO2 -3KG-1no DCP-5KG-1nos		
41	SR -2	CO2 -4.5KG-1nos CO2 -3KG-1no, DCP-5KG-1no		
42		CO2 -4.5KG-1nos CO2 -3KG-1no, DCP-5KG-1no		
43		CO2 -4.5KG-1nos CO2 -3KG-1no, DCP-5KG-1no		
44	F.L SMIDTH OFFICE	CO2-4.5KG-2No		
45	PSS	CO2 -4.5KG-3nos		
46	BMH WORK SHOP	CO2 -4.5KG-1no DCP-5KG-2nos (FOAM-50ltrs)-01no		
47	All Equipment	DCP-5KG-08nos		
48		CO2 -4.5KG-1nos DCP-5KG-1nos		
49	TRANSFORMER HOUSE	CO2 -4.5KG-2nos DCP-5KG-2nos		
50	IMWB Office	CO2 -4.5KG-1no		
51	DIESEL FILLING	Foam-9ltr-1no		
52		Foam-9ltr-1no		
53	WTP	CO2 -4.5KG-3nos		
54	DPCL OFFICE(SALANDI)	CO2-4.5KG-1no DCP-5KG-2nos,		
55	REWA OFFICE	CO2-4.5KG-2No DCP-5KG-1No		
56	CUSTOMS OFFICE	CO2-4.5KG-1No DCP-5KG-1No		
57	DPCL STORE	CO2 -4.5KG-1no		
	Lubricant Store	Foam-9itr-1no		
59	SS-01	CO2 -4.5KG-1no		
60	SS-02	CO2 -4.5KG-1no		
61	SS-03	CO2 -4.5KG-1no		
62	SS-04	CO2 -4.5KG-1no		
63	SS-05	CO2 -4.5KG-1no		
64	NEW CANTEEN	CO2 -3KG-01no DCP-5KG-1no		
65	DHAMRA HOUSE	DCP-5KG-5nos DCP-2KG-01no		
66	KANIKA GUEST HOUSE	CO2 -4.5KG-01no DCP-5KG-2nos		
67	DAV SCHOOL, KUAMARA	CO2 -4.5KG-07nos DCP-5KG-5no		
68	TOWNSHIP	CO2 -4.5KG-11nos		
69	COMMUNITY HALL	CO2 -4.5KG-1nos DCP-5KG-2nos		
70	PREFAB	CO2 -4.5KG-4nos DCP-5KG-4nos		
71		CO2 -4.5KG-1nos		
72	DHAMRA GUEST HOUSE	CO2 -4.5KG-2nos CO2 -3KG-2nos		
73	RAILWAY OFFICE	CO2 -4.5KG-02noS DCP-5KG-3nos		
74		CO2(4.5kg)-2Nos DCP-5KG-1no		
75		DCP-5KG-1no		
76		CO2(4.5kg)-1Nos		
77	STATION	CO2-4.5KG-1No DCP-5KG-1No		
78	GURUDAS PUR TSS	CO2 -4.5KG-1no DCP-5KG-2nos		

79	GURUDAS PUR SUB	DCP-5KG-2Nos
80	INTAKE	CO2 -4.5KG-3nos DCP-5KG-1nos
81	RANITAL	CO2 -4.5KG-1nos
82	GURUDA5 PUR LC-19	DCP-5KG-1no
83	TOWER WAGON	DCP-5KG-3nos
84	TIHIDI STATION	CO2 -4.5KG-1nos DCP-5KG-1nos
85	BANSADA STATION	CO2 -4.5KG-3nos
86	LC-26,NEAR DI ROAD	CO2 -4.5KG-1no
87	KOCHILA OFFICE	C02-4.5KG-2Nos DCP-5KG-2nos
88	BRAMHANI OFFICE	CO2 -4.5KG-1nos DCP-5KG-1nos
89	KANIKA TRANSFORMER	CO2 -4.5KG-1no
90	5ECURITY CONTAINER, NEAR MAIN GATE	CO2 -4.5KG-1nos DCP-5KG-1nos
91	FIRST AID CENTER	CO2 -4.5KG-1nos
92	DPCL AMBULANCE(OLD)	DCP-5KG-1nos
93	DPCL AMBULANCE(NEW)	DCP-5KG-1nos
94	RAILWAY GSS	CO2 -4.5KG-1no DCP-5KG-1no
95	RUNNING ROOM	CO2 -4.5KG-1no DCP-5KG-1no
96	INDUCTION HALL	CO2 -4.5KG-1no
97	FCC GODOWN	CO2 -4.5KG-20no DCP-4KG-1no Foam-9ltr-4nos
98	FCC OFFICE	CO2 -4.5KG-1no DCP-5KG-1no
99	FCC CANTEEN	DCP-5KG-1no
100		CO2 -4.5KG-1no DCP-5KG-3no5
101	WOISTAGE OIL STORE	Foam-9ltr-1nos
102	LABOUR REST HOUSE	CO2 -4.5KG-1no
103	S5-6	CO2 -4.5KG-1no DCP-5KG-1no
104	COLONY PUMP HOUSE	CO2 -4.5KG-1no
105	BHADRAK GUEST HOUSE	CO2 -4.5KG-1no DCP-5KG-1no
106	BB5R OFFICE	CO2 -4.5KG-1no DCP-5KG-1no
Total Fi	re Extinguisher Installed at site	Co2-4.5kg=186nos,CO2-3kg =15nos, DCP-10kg= 02nos, DCP-5kg=105nos,DCP-2kg=08nos & Foam-9ltrs=08nos , Foam -50ltrs -03nos
	BALANCE FIRE TENDER	DCP(ABC)-6KG-08nos, CO2(4.5kg)= 24nos, CO2-3kg =01no,Foam-9ltrs-01nos & Foam(50ltrs)-01nos

### **ANNEXURE - III**

## DETAILS OF MOCK DRILLS

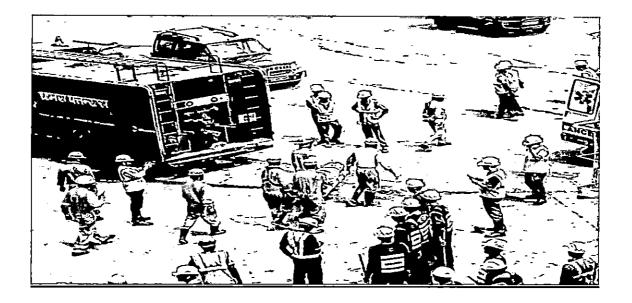
SL.NO	Description of mock drills and	Numbers of training &	Numbers of
	training	mock drill conducted	participants
1	Emergency Rescue mock drill	4	94
2	Safety Induction Training	297	5539
3	Portable fire Extinguishers training	34	904
4	Contractor safety training	87	1609
5	Defensive driving training	64	833
6	Tool box training	37887	314594
7	On the Job Safety Awareness	353	5268

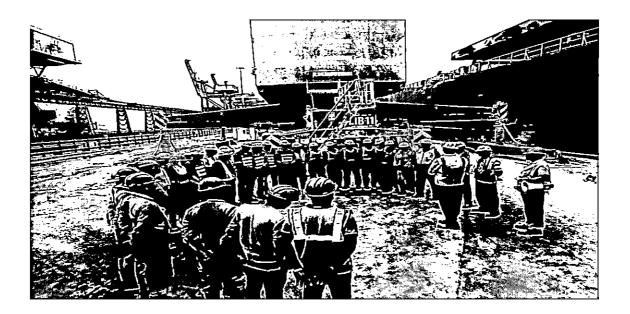
#### FIRE EXTINGUISHER TRAINING





## MOCK DRILL AT SITE

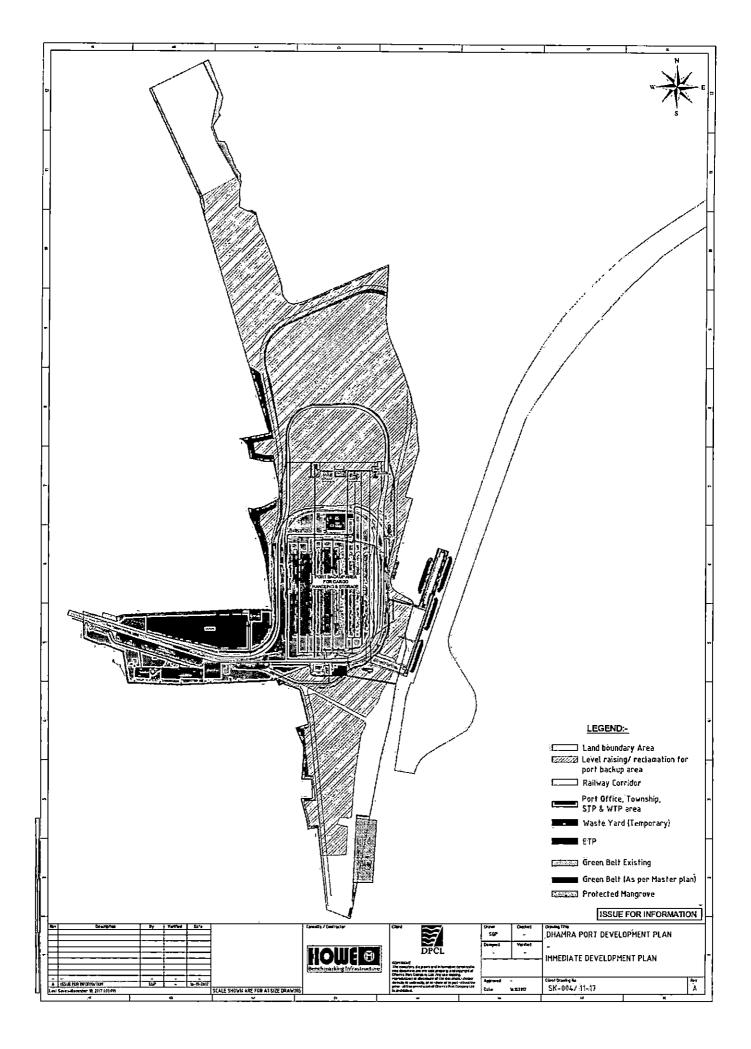




# **ANNEXURE - IV**

.

# PORT LAYOUT



# **ANNEXURE - V GREEN BELT DETAILS**



Fig 1 : Nursery with 1 Lakh Sapling Stock

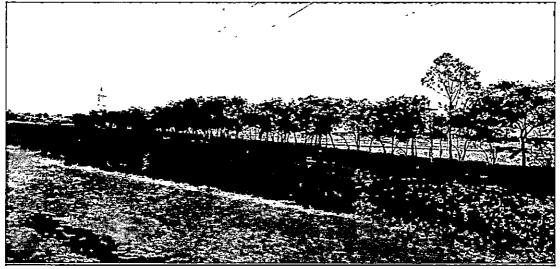


Fig 2: Railway Corridor Edge Plantation

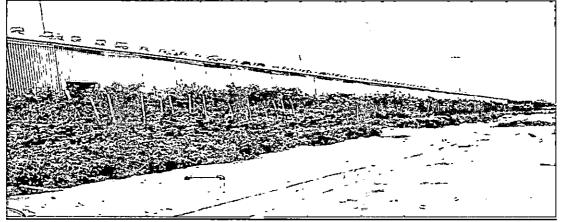


Fig 3: Plantation in-front of Fertilizer Godown



Fig 4: Greenbelt inside the Port



Fig 6: Greenbelt around the Port

# ANNEXURE - VI

## **ENVIRONMENT EXPENSES**

	ENVIRONMEN PROTECTION EXPENDITURES FY 2017-18				
S.	Activity/ Category	Expenditure			
No.	Activity/ Category	in lacs			
1	Environmental Study / Audit	18.37			
2	Legal & Statutory Expenses	15.60			
3	Environmental Monitoring Services	15.92			
4	Hazardous & Non- Hazardous Waste Management & Disposal	42.84			
5	Environment Day Celebration	1.02			
6	Mangrove conservation	2.22			
7	Horticulture/Plantation	198.97			
8	O&M of Sewage Treatment Plant	11.73			
9	Water Treatment Plant	66.73			
10	Dust suppression	61.85			
11	Online display board	0.00			
12	Turtle conservation (Trawler for patrolling)	12.16			
13	Rain water harvesting	14.88			
14	Port Housekeeping	188.43			
	Total Environmental Expenditures (in Lakhs)	650.72			

# ANNEXURE - VII

## PICTURE OF INCOIS ELECTRONIC DISPLAY BOARD INSTALLED AT DHAMRA FISHING HARBOUR



**ANNEXURE- VIII** 

.

# **INTIMATION LETTER TO MoEF&CC**

# adani



20" Nov 2015

DPCL/ENV-06/02/2015

То

The Additional Principal Chief Conservator of Forests Ministry of Environment and Forests, Eastern Regional Office, A/3, Chandrasekharpur, Bhubaneswar- 751023 E-mail: <u>roez.bsr-mef@nic.in</u>

Dear Sir,

- Sub : Half yearly Compliance report of Environment and CRZ Clearance for expansion of Dhamra Port at Dhamra, Bhadrak District of Odisha by M/s Dhamra Port Company Limited
- Ref : 1) Environmental Clearance for Expansion of Dhamra Port Project vide letter dated 4<sup>th</sup> January 2000 bearing NO. PD/26017/8/98-PDZ (CRZ), F. No. 11-164/2009-1A.111 d4.1<sup>th</sup> Jon, Jo14 & Enburgment ormentated. 25<sup>th</sup> March, 2015 and OCXMA recommendation vide letter w. OCXMA-1/2018-13/No.17 d4.20<sup>th</sup> December, 2012 With reference to the above mentioned letter for the said subject matter, please find enclosed herewith the compliance to the conditions stipulated in the letters for the period of Apr' to Sep'15 in both hard & soft copy for your kind reference.

Thank you, Yours Sincerely,

Chief Executive Office

11 R.O 1-751073 NOY 2015 EIVED

Encl: As above

Copy to:

Х

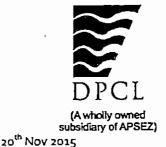
- 1) The Director (Monitoring –IA-III Division), Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi – 110003
- 2) Zonal Office, Central Pollution Control Board, Southern Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata 700 107 (W. B.)
- 3) The Member Secretary, State Pollution Control Board, Odisha, Parivesh Bhawan, A/11B, Unit 8, Nilakantha Nagar, Nayapalli, Bhubneswar-752012
- The Regional Officer, State Pollution Control Board, Odisha, 150, Sahadev Kinunta, Balascre 756001

Head Office : At - Dosinga, Po- Dhamra, Dist : Bhadrak, Odisha, Pin - 756171 Tei : +91 6786 212068

#### = The Dhamra Port Company Limited =

CIN - U452030R1998PLC005448 Website : www.dhamraporLcom Bhubaneswar Office : 2nd Floor, Forume Towers, Grandrasekharpur, Bhubaneswar - 751023 Odisha Tel :+91 674 2303529, Fax :+91 674 2303828

# adani



DPCL/ENV-06/02/2015

То

The Additional Principal Chief Conservator of Forests Ministry of Environment and Forests, Eastern Regional Office, A/3, Chandrasekharpur, Bhubaneswar- 751023 E-mail: <u>roez.bsr-mef@nic.in</u>

Dear Sir,

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Thank you,

Yours Sincerely,

Chief Executive Office

both hard & soft copy for your kind reference.

Encl: As above

Copy to:

- 1) The Director (Monitoring –IA-III Division), Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi – 110003
- 2) Zonal Office, Central Pollution Control Board, Southern Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700 107 (W. 8.)
  - The Member Secretary, State Pollution Control Board, Odisha, Parivesh Bhawan, A/118, Unit 8, Nilakantha Nagar, Nayapalli, Bhubneswar-751012

The Regional Officer, State Pollution Control Board, Odisha, 160, Sahadev Khunta, Balasore -

135 Head Office Bisinga, PoPDangea Dist : Bhadres Bersta ERin Tel:+91 6786 212068

## The Dhamra Port Company Limited =

CIN - U452050R1998PLC005448 Website : www.dhamraport.com Bhubaneswar Office : 2nd Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar - 751023, Odisha Tel :+91 674 2303829, Fax :+91 674 2303828

# ANNEXURE - IX: EMP AND ACTION PLAN

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
				Constructional Phase	
1.	Development / Expansion of Port	Existing land use	Impact on nearby mangrove areas	Scattered mangroves identified near southem boundary of the port in phase I development needs to be conserved. The port boundary will be at a minimum distance of 50 m from the mangrove area on the northern side. Awareness will be created amongst port workers about the importance of mangroves and their conservation	Scattered mangroves identified near southern boundary of Phase I development spread over an area of 9 ha. Bamboo fencing has been done at southern boundary over an area of 9 ha for conservation of mangroves. A buffer of 50m is being maintained between the project boundary and mangrove vegetation.
					Awareness programs for mangrove conservation for port workers are being undertaken
		Impact on turtle nesting	Glare of Port Light may cause disturbance to hatchlings	Install specialized illumination system in line with "International Dark Sky Association (IDA)" to avoid illuminating the sky or focusing light towards sea.	DPCL has already implemented the suggested mitigation measures during Phase I and these measures shall also be implemented during Phase II Expansion of port.
				Mercury vapour and metal halides will not be used Sodium vapour lamps will be used	

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
2.	Capital dredging and reclamation	Marine water quality	Increase in turbidity Change in marine water	Checking of turbidity levels with baseline levels as reference during entire monitoring programme	DPCL regularly monitoring the turbidity levels as a part of marine Environmental monitoring by NABL & MoEF & CC accredited organization to ensure that the turbidity levels are well within the baseline level.
3	Material transport and construction activities	Air Quality	Exhaust emissions from vehicles Dust suspension during site preparation and construction	Providingadequatelysizedconstructionyardforstorageofconstructionmaterials,equipmenttools,earthmovingequipment, etcProvideenclosures on all sides ofconstruction site.Movement of material will be mostlyduring non-peak hours.On-sitevehiclespeedswillbecontrolled to reduceexcessivedust suspension in air and dispersionby traffic.Constructionequipmentandtransport vehicles will be periodicallywashed to remove accumulated dirtWater sprinkling will be carried out tosuppress fugitive dust	protocol twice a week to ensure air quality parameters never exceed the prescribed limits. Vehicular Traffic Speed is kept limited to 20 kmph Regular water sprinkling on roads are being carried out by water tankers. Environment Awareness/training

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
		Noise	Noise from following activities Vehicles transporting construction material Diesel run engines of construction machinery and dredgers Pile driving activities during construction of cargo berths	Environmental awareness training will be imparted to personnel involved in developmental works. Procurement of machinery / construction equipment will be done in accordance with specifications conforming to source noise levels less than 85 dB (A) Well-maintained construction equipment, which meets the regulatory standards for source noise levels, will be used Noise attenuation will be practiced for noisy equipment by employing suitable techniques such as acoustic controls, insulation and vibration dampers Personnel exposed to noise levels beyond threshold limits will be provided with protective gear like earplugs, muffs, etc.	We have a strict maintenance regimen for all plant machinery and equipment which is reviewed by the management every day. PPE's like Earplug, muffs are being used in noise prone areas. Noise level monitoring is being carried out by a MoEF & CC accredited agency.
		Disturbance to Natural Drainage pattern	Impact to natural flow of runoff due to blockage and		Storm water drainage network is planned to facilitate proper drainage of the area and

•

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
			change of drainage course	reinstated	requirement of local villager for tide water and boat movement has been duly considered in the drainage plan.
		Vegetation and Strain on existing	Loss of vegetation and strain on existing infrastructure	There will be no loss of vegetation as the area does not contain any tree growth. Temporary workers camp will be provided with sufficient infrastructure and other provisions	Worker camps have been provided with sufficient infrastructure and electricity
		Existing Traffic	Traffic addition	The existing road will be strengthened to cater the increased traffic	Government of Odisha has already started widening this road to a two lane road with paved shoulder which shall cater the increased traffic
4	Land Reclamatio n	Existing Water Resources like Groundwater and surface water	The land reclaimed is saline mud and is separated from the adjoining land mass through the salt dyke. This being an intertidal zone, there will be no impact on groundwater quality	Protective bunds (salt dyke) already exists which will prevent inundation of salt water to the adjoining land. Return seawater will be channeled back to sea.	Reclamation activity is being done within reclamation bunds and it is physically separated from the adjoining land mass.
5	Solid Waste Management	Soil quality	Impacts due to disposal of solid	Construction waste will be used within port site for filling of low	Under the inspiration of Prime Minister's Clean India Mission,

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
			waste on ground	lying areas. Composted bio-degradable waste will be used as manure in greenbelt. Other recyclable wastes will be sold. General refuse generated on-site will be collected in waste skips and separated from construction waste. Burning of refuse at construction sites will be prohibited.	APSEZ has developed a vision for making itself — "A Zero Waste Company" by the year 2020. APSEZ's vision is based on adoption of 5R's principle of waste management, i.e Reduce, Reuse, Reprocess, Recycle & Recover. Construction waste generated was used in low lying areas as a standard practice Bio- degradable waste is being used as manure for horticulture activities and for development of nursery Waste Segregation is being done at Point of Generation and Color Coded bins are in use in the Port Residential Area Burning of wastes is prohibited within the premises
6	Händling of hazardous wastes	Hurnan safety and property loss	Accidents during construction	Adequate safety measures as per OSHA standards will be adopted. Construction site will be secured by	DPCL has got the authorization from OSPCB vide letter no. IND- IV-HW-894/1460 on dated

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
				fencing with controlled/limited entry points. Hazardous materials such as lubricants, paints, compressed gases, and varnishes etc., will be stored as per the prescribed/approved (MSIHC) safety norms. Medical facilities including first-aid will be available for attending to injured workers.	09.09.2015 for handling of hazardous waste used oil, waste containing oil, oil contaminated filters elements valid till 31.03.2020. DPCL had made an agreement with OSPCB approved vendor for collection of used oil. Vendor shall take care of treatment & disposal at their site premises as per OSPCB norms.
					We have a strict safety regimen with the motto "Safety First" Safety Observations are mandatory from every department of the port and immediate measures are undertaken to rectify the shortcoming.
					OHSAS Guidelines and MSIHC Guidelines are followed for Hazardous wastes
7	Fishing	Fishermen and fishing villages	Impact on fishing due to Construction works	Signboards will be placed at the construction sites in order to make fishermen aware of the	Our navigational channel is well marked with marker buoys and fishermen community are regularly

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
				ongoing activities	sensitized via our well-staffed CSR Team on Port Activities
_	·		Operat	ional Phase	
1.	Cargo handling and Inland Cargo movement and storage areas	Air Quality	Emissions from loading/unloading equipment, DG sets, vehicular dust emissions, fugitive emissions from storage areas, spillage of cargo	Use of specialized ship loaders/unloaders, wagon tippler, covered conveyors and rapid loading system through silos Dust suppression measures at loading/unloading points, wagon tippler complex, transfer points, stockyards, rapid loading system and at internal roads Periodic cleaning of cargo spills and speed regulations for vehicles engaged in transportation	Noted and complied.
		Noise Traffic Addition	Due to equipment handling and vehicular movement Ship (un)loading operations Cargo movement from/to port	Acoustic Barriers and Enclosures Personal Protection Equipment (PPE) Counseling and traffic regulation A dedicated rail corridor of 62.5 km has been developed and cargo is being transported through rail. A dedicated four lane road and doubling of rail link along the rail corridor has been proposed in the	Noted and complied. Majority of the cargo is being transported through rail.

•

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
2.	Aqueous discharges in harbor basin	Marine water quality and ecology	Change in marine water quality/ ecology due to discharge of ship wastes, sewage, ballast water, bilge water, solid waste etc.	Ships should comply with the MARPOL convention. As a mitigation measure for accidental spillages, Oil spill contingency plan will be implemented. Carrier will be required to exchange ballast water in a deep sea location prior to arrival in the harbor Provision of waste reception facility for bilge oily water and waste oil will be provided	Noted and complied. MARPOL and Ballast Water Convention guidelines are enforced by DPCL for visiting ships.
3.	Accidental Cargo and Oil spills	Marine water quality and ecology	Change in marine water quality	In case of any cargo spillage during transfer from/to ships, it will be attempted to recover the spills. Oil spill control equipment such as booms / barriers will be provided for containment and skimmers will be provided for recovery Response time for shutting down the fueling, containment and recovery will be quicker.	Noted and complied. Marine water quality and productivity is being monitored by MoEF&CC accredited laboratory, there are no adverse impact on water quality and marine productivity in the vicinity. No impact on water quality and marine productivity has been envisaged during this period. Oil Spill Containment equipment in readiness.

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
					Oil Spill drills are conducted on a regular basis
4.	Maintenance dredging	Marine water quality	Increase in turbidity	It will be ensured that the dumping of the maintenance dredge spoil would be uniform. Turtle deflectors on dredge head will be provided Environmental Monitoring Programme comprising of monitoring of marine water quality, marine sediment quality and marine ecology will be initiated one week prior to commencement of dredging and will be continued during the dredging period.	Noted and complied. Marine water quality and productivity is being monitored by MoEF & CC accredited laboratory, there are no adverse impact on water quality and marine productivity in the vicinity. No impact on water quality and marine productivity has been envisaged during this period.
		Marine Ecology	Due to decrease in DO levels which effect marine ecology and disturbance to benthic communities,		
5.	Water Supply	Water resources	Impact on existing water resources	Government of Odisha has accorded permission for water intake of 5 MLD from Matai River which can cater requirement for port expansion. Water Treatment Plant (WTP) of 5 MLD and water distribution system developed for	Complied.

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
				Phase I. Distribution system shall be extended to cater to the requirement of expansion project.	
6.	Wastewater Discharge	Water Quality	Impact due to discharge of runoff from stock piles and disposal of untreated sewage	Collection of runoff from stock piles in settling ponds. Sewage treatment plant will be provided. Treated wastewater from STP will	Complied.
7.	Solid Waste Management	Groundwater and Soil quality	Impact due to disposal of untreated solid waste on ground	be used for irrigating the greenbelt Composted bio-degradable waste will be used as manure in greenbelt. Other recyclable wastes will be sold.	Garbage Yard Space allocated for Phase II Operational Phase. Solid Waste Management would be done by Segregation at Generation Points
8.	Cargo Movement	Existing infrastructure	Increase in Traffic Addition	A dedicated rail corridor of 62.5 km has been developed and cargo are being transported through rail A dedicated four lane road and doubling of rail link along the rail corridor has been proposed in the Phase II	Rail Road Corridor infrastructure would be augmented to cater the increased traffic

S. No.	Activity	Relevant Environmental components likely to be impacted	Likely Impacts in absence of Mitigation Measures	Mitigation Measures	Compliance
9.	Handling of hazardous materials	Accidents due to products handling	Human life and loss of property	<ul> <li>Hazardous materials will be stored as per the prescribed/approved (MSIHC) safety norms.</li> <li>Operation areas will be secured by fencing with controlled/limited entry points.</li> <li>Hazardous wastes (used oil &amp; used battery) will be sent to OPCB approved recyclers.</li> <li>Medical facilities including first aid will be available for attending to injured workers.</li> <li>Regular check of pipelines and tank farms</li> <li>Emergency alarms, provision of fire hydrant system and fire station.</li> <li>Effective Disaster Management Plan (DMP) which covers onsite and offsite emergency plans.</li> </ul>	Three types of hazardous waste i.e Used oil, Oil contaminated filters & Waste containing oil is being handled presently on our port premises. Used oil is being recycled through authorized recyclers. Proper Care is taken when handling of this waste and a well- marked storage shed is used for storage of hazardous waste. Hazardous Waste Storage and Handling Facilities will be upgraded during the advance stage of Phase II operation.
10.	Fishing activity	Fishermen livelihood	Impact on fishing due to vessel movement	Creation of awareness among the fisher folk about orientation of approach channel	Fishermen Community are a part of the port community and we have regular and positive interactions with them. Oriental of Navigational Channel is well marked with marker buoys and known to the fishing community

#### ANNEXURE-X

#### ENVIRONMENT CLEARANCE COPY TO ZILLA PARISAD

#### The Dhamra Port Company Limited Second Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar - 751023.

Second Floor, Fortune Towers, Chandrasckharpur, Bhubaneswar - 751023. Tel : 0674 - 2303829, Fax : 0674-2303828, E-mail : dpcl@dhamraport.com Website : www.dhamraport.com, CIN-U452050R1998PLC005448



23.01.2014

То

The Chairman, Zilla Parishada, Bhadrak / Sarpanch, Dosinga Panchayat / NGO (Local)

Sub: Environmental Clearance for Phase- II Expansion of Dhamra Port

Dear Sir,

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۰ŋ :

The Dhamra Port has been granted Environmental Clearance by the Government of India on 1<sup>st</sup> Jan 2014 for its second phase expansion. The copy of the EC is enclosed here with for your kind reference.

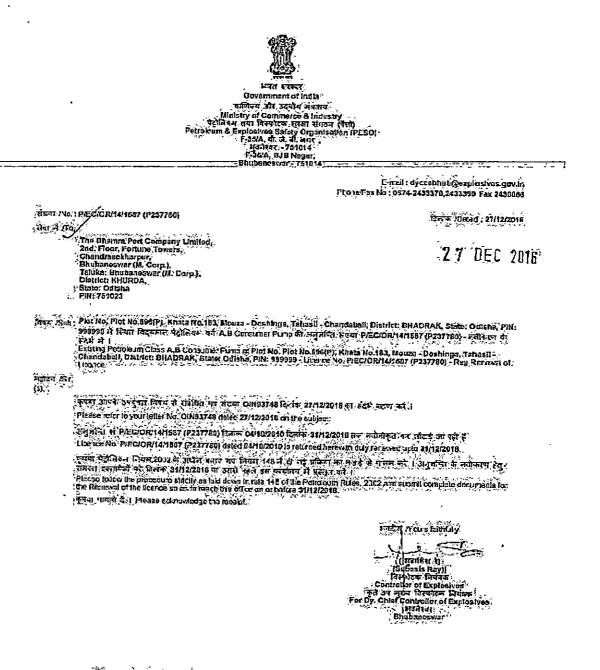
Yours Sincerely,

Homener Sheklar Salm Himansu S. Sahoo AGM-CC & CSR Dhamra Port Company Limited Mob - 9777453847

(Japannaulti Swain) Poesident, Zilla Parishad

#### ANNEXURE-XI - LICENSE AND NOC FROM FIRE DEPT

#### LICENSE OF STORAGE OF EXPLOSIVES



(मंदिक अनुमाती जैवे आवेदत भी स्ट्रांति सुन्त तथा अत्य विवरण के तिप समारी वेदसाइट रास्ताअवडव हरू आवेदी) (For incontromistion regarding datas fees and alter college passe well our veceslerity and gov/in the

#### NO OBJECTION CERTIFICATE FROM OFS, ODISHA GOVT. TO DPCL ON FIRE SAFETY

N.	OFS OFFICE OF THE FIRE PREVI ODISHA, BHUBAN	
No	ネタタ /FPW BBSD -	
	<u>_293</u> /FPW,BBSR -	Dt. 05-04.2013
То		
	The Manager Environment Health Safety The Dhamra Port Company Ltd.	' <i>i</i>
Ref:-	Your letter No. DPCL/EHS/SO-287 dtd.08.12	.2010.
Sub:	Grant of NOC from fire safety point of view	to Dhamra Port.

With reference to the letter on the subject cited above this is to intimate that on your request the fire protection system of Dhamra Port was inspected on 09.03.2013 by a joint team comprising of Deputy Fire Officer, Fire Prevention Wing, Bhubaneswar and Deputy Fire Officer, Bhubaneswar Circle. The observations are as under.

#### **Observations**

The team inspected the following establishments/areas of Dhamra Port which are important from fire safety point of view.

1.1

2.1

1. Motor Control Center-1,2,3,4(Single storied).

2. Fire water Pump house- Single floor.

3. Water treatment Plant=G+1 floor.

4

4. Administrative Office-Single floor.

5. Rail loading system for coal.

6. Rail loading system for Lime stone.

7. Switch yard.

Dear Sir,

8. Coal stack pile area.

- 1-\*

9. Jetty area.

10.Transfer points.

The following fire protection measures have been provided in the above mentioned areas as indicated against each.

si' -	Name of area	No. of	No. of	No. of	Smoke	Manual call
No.	name or area	external	internal	Monitors	detectors	point with
1.0.		hydrant	hydrant.	110111013	0000015	hooters
01	Motor Control Center-1	1 no.			32 nos	02 nos
02	Motor Control Center-2	2nos			18:nos	02 nos
03	Motor Control Center-3	2nos			09 nos	01 no.
04	Motor Control Center-4	2nos			06 nos	01 no.
05	Fire water Pump house	01 no.				
06	Water treatment Plant					
07	Administrative Office	04 nos	06 nos			
08	Rail loading system for Coal		06 nos	01 no.		
09	Rail loading system for Lime stone		05 nos	01 no.		
10	Switch yard.	01 no.				-
11	Coal stack pile area	59 nos		13 nos		
12	letty area.	16 nos			•	• • • •
13	Transfer points		03nos. in each			

The entire Port area have been provided with hydrant system. Near each external/ internal hydrant point 01 hose box containing 02 delivery hoses of 15 mtrs length each and 01 branch pipe has been provided. Besides the entire Coal stack pile area has been provided with water sprinkling system. The control room has been set up and a panel board connecting all the Smoke detectors has been installed there. One fire pump house has been setup where one electric pump and one diesel pump of 4555 ltrs/min capacity each and one Jockey pump of 450 ltrs/min capacity have been installed to supply water to the hydrant and sprinkling system. Two nos. Fire water reservoir of 6,00,000 ltrs capacity each have been provided to supply

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water to the fire fighting system. Besides  $34 \text{ nos } \text{Co}_2$  (4.5 kg), 22 nos  $\text{Co}_2(3.2 \text{ kg})$ , 08 nos DCP (5 kg) and 10 nos DCP(10 kg) fire extinguishers have been installed at required places.

All the above mentioned fire protection measures were test checked and found working properly.

The stacking of coal in the pile area should be done as per IS: 3595/2002

Yours sincerely,

**Fire Prevention** cer Odisha, Bhubaneswar

Memo No.\_\_\_\_\_/FPW,BBSR

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.03.2013

Date

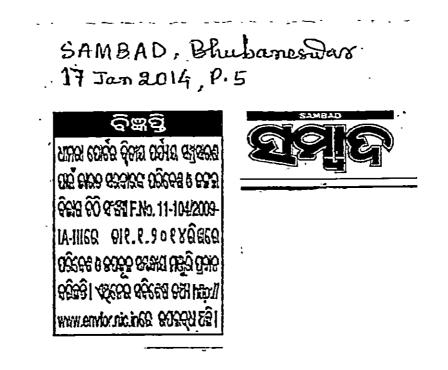
Copy submitted to the I/C Chief Fire Officer, Odisha, Cuttack/D.G & I.G of Police, Fire Service, Odisha, Cuttack for favour of information.

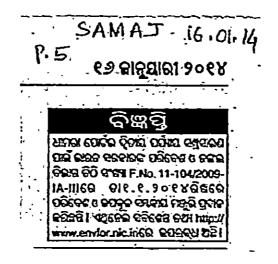
Sdr

Fire Prevention Officer Odisha, Bhubaneswar

#### ANNEXURE-XII

#### ADVERTISEMENT IN LOCAL NEWSPAPER INTIMATING GRANT OF ENVIRONMENTAL & CRZ CLEARANCE





# **ANNEXURE-XIII**

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**ENVIRONMENT STATEMENT FOR FY 2016-17** 

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#### DPCI/ENV/OSPCB/2017-45

#### 18<sup>th</sup> September, 2017

The Member Secretary State Pollution Control Board, Odisha A/118, Nilakantha Nagar, Unit –Vill, Bhubaneswar – 751012

Dear Sir,

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Sub: Environmental Statement for the financial year ending 31<sup>st</sup> (March, 2017 for M/s The Dhamra Port Company Limited.

Ref: Consent Order No. 6441/INC-I.CON-6348 dated 04.04 2016

With reference to the above-mentioned subject, please find enclosed Environmental Statement The Form V prescribed under Rule 14 of the Environment (Protection) Rules 1986, for M/s The Dhamra Port Company Limited for the financial year ending 31<sup>st</sup> March 2017.

Thanking you,

Yours faithfully, For The Dhamra Port Company Umited

Chief Exe

Encl: As above.

Copy.to: The Regional Officer, State Pollution Control Board, Odisha. 160, Sahadev Khunta, Balasore, Odisha

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The Dhamra Port Company Limited-

At, Dosinga, Po: Dhamra Dist: Bhadrak PIN: 756171 Odisha, India CIN: U452050R1998PLC005448 Teli+ 91-574 2304500 (Bhubaneswar) • 91-5786 270100 (Dhamra) Eax + 91-574 2303828 reach dhamraport@adanl.com: Www.adanl.com www.dhamraport.com

Registerod Office: HiG-20, BDA Colony, Jayadev Vilhar, Bhubaneswar - 751, 013, Odisha, India

#### FORM V (See Ruie 14)

# Environmental Statement for the Financial Year ending 31<sup>st</sup> March 2017

#### <u> PART – A</u>

(i)	Name and address of the Owner/ Occupier of the Industry Operation or Process	:	Subrat Tripathy Chief Executive Officer M/s The Dhamra Port Company Limited Village-Dosinga, PoDhamra, Dist-Bhadrak Odisha - 756171
(ii)	Industry Category	:	Red-B
	Primary (STC Code)		NA
	Secondary (STC Code)		NA
(iii)	Production Capacity	:	25 Million MT/Annum
(iv)	Year of Establishment	:	2000
(v)	Date of last Environment Statement submitted	:	17 <sup>th</sup> September, 2016

#### <u> PART – B</u>

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#### Water and Raw Material Consumption

(i) Water Consumption		
Water Consumption Cu. Mtr./Day		
Process	Nil	
Cooling	Nil	
Domestic	295.2 m³/day	·····
Dust suppression	474.5 m³/day	
Fire fighting	1039.3 m³/day	

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Name of Products Process Water Consumption		per unit of Product Output	
	During the current financial year (2015-16)	During the current financial year (2016-17)	
Handling of Iron Ore, Coal, Limestone*	0.030 m³/Ton	0.026 m³/Ton	

#### (ii) Raw Material Consumption

Name of Raw	Name of Products	Consumption of Raw Material per Unit of output		
Material	riouucis	During the previous financial year (2015-16)	During the current financial year (2016-17)	
NIL*	Not Applicable	Nil	Nil	

\* Unit does not have any manufacturing process

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#### <u> PART – C</u>

#### Pollutants discharged to Environment/Unit of Output (Parameters as specified in consent issued)

Pollutants	Qüantity of pollutants discharged (Mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons		
(a) Water		Nil*			
(b) Air	Monitoria	Monitoring data attached as Annexure-1			

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\*Unit does not manufacture anything, as it is a service industry (Port) engaged in handling and storage of cargo. No effluents are generated from the port. Treated water from the STP is used for horticulture purposes.

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#### <u> PART – D</u>

#### Hazardous Wastes

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

	Total Quantity			
Hazardous Wastes	During the previous financial year (2015-16)	During the current financial year (2016-17)		
(a) From Process (Used oil)	8.326 KL	5.045 KL		
(b) From Process (Waste Containing Oil)	0.000	0.886 MT		
(c) From Process (Oil Contaminated Filters)	0.000	- 124 Nos.		
(d) From Pollution Control facilities	NII	Nil		

#### <u>PART – E</u> Solid Waste

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	Total Quantity Generated (MT/Annum)			
Solid Waste	During the previous financial year (2015-16)	During the current financial year (2016-17)		
(a) From Process (Ash)	· Nil	Nil		
(b) From Pollution Control facilities	Nil	1.56 MT/Annum		
(C-1) Quantity recycled or reutilized within the unit	Nil	1.56 MT/Annum		
(C-2) Sold	Nil	Nil		
(C-3) Disposed	Nil	Nil		

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#### <u>PART - F</u>

Please specify the characterization (in terms of Composition and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes:

Hazardous Waste						
SI. No	Name of waste		Generation quantity	Disposal method		
1	Used oil		5.045 KL	Sold to Authorized Recyclers /Reprocessors		
2	Waste containing oil		0.886 MT	ACC for co-incineration /energy recovery		
3	Oil contaminated elements	filter	124 Nos.	ACC for co-incineration /energy recovery		

DPCL has got the authorization from OSPCB vide letter no. IND-IV-HW-894/1460 on dated 09.09.2015 for handling of hazardous waste used oil, waste containing oil, oil contaminated filters elements valid till 31.03.2020.

Solid Waste						
SI.	Name of waste	Generation quantity	Disposal method			
No						
1	Metallic waste	353.610 MT	Sold to scrap vendor for recycling			
2	Rubber waste	168.030 MT	Sold to scrap vendor for reuse			
3	Paper waste	3.515 MT	Recycled for making note pac through third party recycler			
4	Plastic waste	1.779 MT	Sent to M/s ACC for co-incineration / energy recovery			
5	Glass Waste	1.695 MT	Sold to scrap vendor for recycling			
6	Food waste	41.307 MT	Used for making compost for horticulture use			
7	STP <sup>-</sup> Sludge	1.560 MT	Used for horticulture purpose as manure			

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#### <u>PART – G</u>

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

- DPCL has two nos. of Sewage Treatment Plant (STP) of capacity 140 KLD & 15 KLD each, so as to handle sewage generated from port & township. The STP treated water is being used for horticulture and gardening purpose. DPCL has a settling pond where all generated waste water is being collected for settling of sediments by application of lime. The treated settling pond water is
- further being reused for dust suppression & road sprinkling.
- During the financial year 2016-17, the total amount of Rs. 1.30 Crores was incurred on environmental protection measures.

#### <u>PART – H</u>

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

- Green belt has been developed inside the port premises and along the Rail /Road corridor of 62 km length. Strip plantation on both the edges of railway corridor has been taken up and 1,79,500 plants have been planted along the north & south edges of the corridor till date. Plantation of suitable species has been taken up in and around the port area and admin/Residential area with effect from 2010 & is continuing. So far 2,01,990 plants suitable for the site have been planted at Port site apart from the rail road corridor plantation mentioned above.
- We are also conserving the natural patch of mangrove situated at south side of our port premises by bamboo fencing within area of 9 ha. We have also developed a nursery with massive numbers of mangrove sapling.

#### <u> PART – I</u>

Any other particulars for improving the quality of environment:

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- Specialized illumination system in line with "International Dark Sky Association (IDA)" has been installed to avoid illuminating the sky or focusing light towards sea. Sodium vapour lamps are being used instead of mercury lamp. All area lighting, roadway lighting and lighting mounted on masts or other elevated structures are of full cutoff luminaries.
- Deflectors are installed on drag-head of dredgers to keep turtles out of path of dredger. Screens are also installed in inflow/overflow pipes of dredgers to monitor turtle entrainment. There are observers on Dredgers to ensure implementation of IUCN Dredging Protocol.
- DPCL has made an effective contribution towards Environment Protection, management and conservation during this year.

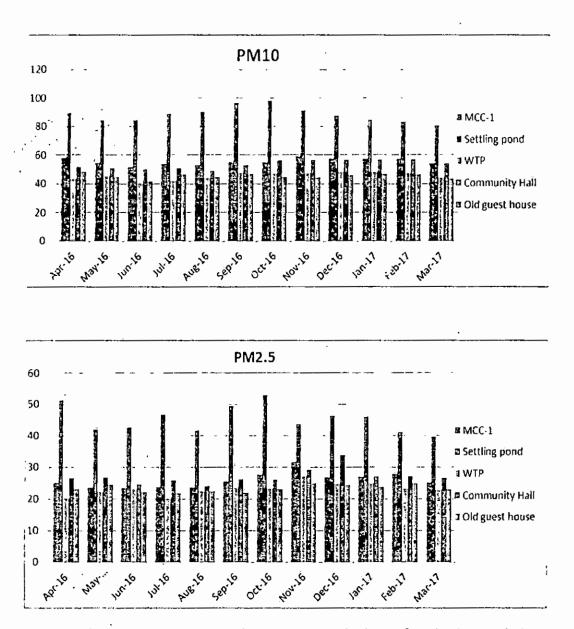
- 100 % waste water generated is being reused and recycled.
- All kind of waste generated at site are being treated in line to 5 R's.
- DPCL believe in sustainable development and are working in close harmony of biodiversity rich area. We are regularly monitoring our foot prints on environment.

Date : 18-09-2017

(Signature o pg out an industry,

operation or process Name . Subrat Tripathy Designation : CEO Address : M/s The Dhamra Port Company Limited Village-Dosinga, Po. Dhamra, Dist- Bhadrak, Odisha

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Annexure 1

Note: Other parameters monitored as per AAQ standard were found to be BDL during monitoring.

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