

## The Dhamra Port Company Limited

(A joint venture of L & T and Tata Steel)

Second Floor, Fortune Towers, Chandrasekharapur, Bhubaneswar - 751023.

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Santosh K. Mohapatra, IAS (Retd)

CEO

DPCL/ENV-29/4/13

Dt. 16/09/2013

The Member Secretary  
State Pollution Control Board, Odisha  
Parivesh Bhawan, A/118, Unit 8  
Nilakantha Nagar, Nayapalli  
Bhubaneswar- 751 012

Sub: Environmental Statement of Dhamra Port Expansion  
Project in Bhadrak district for financial year 2012- 2013

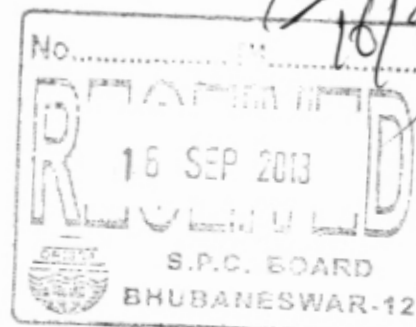
Dear Sir,

The Environmental Statement of Dhamra Port Expansion Project for  
financial year 2012- 2013 is submitted herewith.

Thanking You,

Yours Sincerely

Santosh K. Mohapatra



[FORM-V]

**Environmental Statement for the financial year ending the 31<sup>st</sup> March 2013**

**PART – A**

<b>I.</b>	Name and address of the owner/occupier of the industry operation or process	<b>Santosh K. Mohapatra Chief Executive Officer M/s The Dhamra Port Company Limited (DPCL) Fortune Towers, 2<sup>nd</sup> Floor Chandrasekharapur, Bhubaneswar-751023</b>
<b>II.</b>	Industry category Primary (STC code)	<b>AABCD0602PST001</b>
	Secondary (SIC Code)	<b>488310</b>
<b>III.</b>	Production capacity	<b>Nil</b>
	Cargo Handling Capacity	<b>25 MTPA</b>
<b>IV.</b>	Year of establishment	<b>2000</b>
	Year of operation	<b>2011</b>
<b>V.</b>	Date of the last environmental statement submitted	<b>19<sup>th</sup> October 2012</b>

**PART – B**

**Water and Raw Material Consumption**

- (1) Water consumption m<sup>3</sup>/day:
- |          |     |
|----------|-----|
| Process  | NIL |
| Cooling  | NIL |
| Domestic |     |

Total water requirement with break up is given below:

<b>S. No.</b>	<b>Activity</b>	<b>Water Requirement (M<sup>3</sup>/day)</b>
1.	Dust suppression and fire fighting purposes	824
2.	Township supply	100
3.	Ship supply	120
4.	Port staff and users	81
5.	Green belt development	125
<b>Total</b>		<b>1250</b>

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Name of Products	Process water consumption per unit of product output	
	During the previous financial Year	During the Current financial Year
	(1)	(2)
(1)	<b>Not Applicable</b>	
(2)		
(3)		

1. Substituted by Rule 2 (b) of the Environment (Protection) Amendment Rules, 1993 notified vide G.S.R 3'6 (E) dated 22.04.1993.

ii) **Raw Material Consumption:** **Not Applicable**

*Name of raw materials	Name of products	Consumption of raw material per Unit of output	
		During the Previous financial Year	During the current financial year

\*Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

### PART - C

Pollution discharged to environment/unit of output  
(Parameter as specified in the consent issued)

1) Pollutants	Pollutants discharged	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
a) Water b) Air	NIL PM <sub>10</sub>	NIL 62.17µg/m <sup>3</sup>	NIL Below NAAQS standard of 100 µg/m <sup>3</sup>

## PART – D

### Hazardous Wastes

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

Hazardous Waste	Total Quantity (Kg.)	
	During the previous Financial Year	During the current Financial year

- |    |                                    |     |
|----|------------------------------------|-----|
| a) | From process                       | Nil |
| b) | From pollution control facilities. | Nil |

**Negligible quantity of used oil is generated from DG sets and loco workshop.**

## PART – E

### Solid Wastes

		Total Quantity	
		during the previous financial year	during the current financial year
(a)	From process		
(b)	Form pollution control facility		
(c)	(1) Quantity recycled or re-utilized within the unit		
	(2) Sold		
	(3) Disposed		

**Only domestic biodegradable and non-biodegradable solid waste are generated from township and administrative department.**

## PART – F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

- **Generated used oil is disposed off through OPCB/CPCB authorized waste recyclers**
- **Composted bio-degradable waste is used as manure in greenbelt**
- **Other recyclable wastes are sold to respective vendors**

## **PART – G**

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

Regular monitoring of ambient air quality, surface water quality, soil, noise etc; are taken up by Institute of Minerals and Materials Technology (IMMT) - a CSIR body of Government of India to evaluate the efficiency of pollution control systems and pollution control measures. All environmental parameters are well within prescribed standards.

Costing details given at Annexure-I

## **PART – H**

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

Provided at Annexure-II

## **PART – I**

Any other particulars for improving the quality of the environment

Green belt has been developed at the port site and along the 62 km Rail/Road corridor of DPCL. Strip plantation on both the edges of railway corridor has been taken up and 1, 60,000 plants have been planted along the north & south edges of the corridor. Plantation of suitable species has been taken up in and around the port bulb and admin/Residential area with effect from 2010 & is continuing. So far 1, 62,000 plants suitable for the site have been planted at Port site apart from the rail road corridor plantation mentioned above.

Additionally, Dhamra Port Company has proposed to establish a special corpus with a sum of Rs.30 Crores for sustainable management of natural resource in co-operation with relevant authorities and in consultation with stakeholder groups. The corpus will be managed by a society to be constituted as per advice of Government. The objective of the society will be primarily conservation and protection of the Olive Ridley turtles, its habitat, other environmental issues and related socio-economic activities.

Santosh K. Mohapatra  
Chief Executive Officer

M/s The Dhamra Port Company Limited  
Fortune Towers, 2<sup>nd</sup> Floor, Chandrasekharpur  
Bhubaneswar-751023

**ANNEXURE-I****Environmental Expenditure Details**

S. No.	Item	Up to 2010-11	2011-12	2012-13	Total
1	Water Treatment Plant	28.39	0.678	0.726	29.794
2	Drainage Management	1.4	0.607	0.063	2.070
3	IUCN Fees for advice on Environmental Management	4.14	0	0	4.140
4	Green belt Development	2.91	0.53	0.43	3.870
5	Monitoring of Environment Parameters by IMMT	0.725	0.3	0.253	1.278
6	Establishment & Functioning of Environment Laboratory	0.08	0.075	0.0108	0.166
7	Turtle Conservation measure and Awareness Programmes	0.15	0	0.005	0.155
8	Providing Trawler to Forest Dept for Patrolling (including fuel)	0.11	0.07	0.0783	0.258
9	Dredging Monitoring for marine life protection	2.24	0.33	0.03	2.600
10	Installation, O & M of 140 KLD STP	0.35	0.092	0.0944	0.536
11	Fire Tenders & Fire Fighting System	0.063	0.096	0.334	0.493
12	Demarcation of Gahirmatha Marine Sanctuary	0.177	0	0	0.177
13	Fees deposited to Statutory Bodies	0.1	0.0075	0.174	0.282
14	Safety	0	0	0.0416	0.042
15	Oil Boom and Skimmers	0	0.62	0	0.620
16	Solid Waste management	0	0	0.104	0.104
17	IUCN Environment Management Plan	0.0168	0.116	0	0.133
18	Dust Suppression Measures	0.12	0.0395	1.008	1.168
19	EIA Study	0.3105	0.1	0.1442	0.555
20	Dark Sky Lighting	2.7	0	0	2.700
21	Settling Pond	5.82	0	0.03	5.850
22	Covered Conveyor Belt	0.08	0	0	0.080
	Additional Studies				
23	NIO Shoreline Changes Study	0.22	0	0	0.220
24	NIO Study on Dredging Impacts	0.42	0	0	0.420
25	NIO Study on Hydrodynamics	0.21	0	0	0.210
26	HTL, LTL Demarcation by NIO	0.11	0.011	0	0.121
27	Mangrove Mapping by SPARC	0.02	0	0	0.020
	<b>Total</b>	50.8623	3.672	3.5263	<b>58.0606</b>

## ANNEXURE-II

### Measures for Environmental Protection including abatement of Pollution

S. No	Parameter	Source of Pollution	Proposed Mitigation Measures
<i>Construction Phase</i>			
1.	Existing mangroves (The proposed site is mud bereft of any mangrove except a small patch of scattered mangrove at the south)	Development/ Expansion of Port	<ul style="list-style-type: none"> <li>- Scattered mangroves identified near southern boundary of port in phase I development were excluded by fencing &amp; steps taken for conserving them.</li> <li>- Mangrove plantation programme will be taken up at suitable places in consultation with the forest department</li> <li>- Port boundary will be at a minimum distance of 50 m from mangrove area on north eastern side of phase II boundary.</li> <li>- Awareness will be imparted to workers in the port about the importance of mangroves and their conservation</li> </ul>
2.	Impact on turtle nesting (the port site is 15 km to the north of Gahirmatha nesting beach)	Lighting and Dredging	<ul style="list-style-type: none"> <li>- Install specialized illumination system in line with “International Dark Sky Association (IDA)” to avoid illuminating the sky or focusing light towards sea.</li> <li>- Mercury vapour and metal halides will not be used</li> <li>- sodium vapour lamps will be used</li> <li>- Turtle Deflectors will be fixed on all Trailer Suction Hopper Dredgers (TSHD) during dredging</li> <li>- Dredging will be monitored by Turtle observers on board the TSHDs.</li> <li>- Dredging protocol to avoid entrapment of turtles will be followed</li> </ul>
3.	Marine water quality & marine ecology	Capital dredging and reclamation	<ul style="list-style-type: none"> <li>- Check turbidity levels with baseline levels as reference during entire monitoring programme</li> <li>- Adopt less intrusive dredging techniques</li> <li>- Ensure that slop tanks will be provided to barges/ workboats for collection of liquid/ solid waste</li> <li>- Discharge of waste into sea will be prohibited &amp; Oil Spill control measures will be adopted</li> <li>- Dredge material shall be disposed only at designated disposal area</li> <li>- Marine environmental monitoring as per environmental monitoring programme will be carried out</li> </ul>
4.	Air Quality	Material transport and construction activities	<ul style="list-style-type: none"> <li>- Providing adequately sized construction yard for storage of construction materials, equipment tools, earthmoving equipment, etc</li> <li>- Adopt spill control measures</li> <li>- Provide enclosures on all sides of construction site &amp; water sprinkling will be carried out to suppress fugitive dust</li> <li>- Movement of material will be mostly during non-peak hours</li> <li>- On-site vehicle speeds will be controlled to reduce excessive dust suspension in air and dispersion by traffic</li> <li>- Construction equipment and transport vehicles will be periodically washed to remove accumulated dirt</li> <li>- Environmental awareness training will be imparted to personnel involved in developmental works</li> </ul>
5.	Noise levels	Material transport and construction activities	<ul style="list-style-type: none"> <li>- Noise levels will be maintained below threshold levels stipulated by CPCB/OPCB</li> <li>- Procurement of machinery/construction equipment will be done in accordance with specifications conforming to source noise levels less than 85 dB (A)</li> <li>- Well-maintained construction equipment, which meets the regulatory standards for source noise levels, will be used</li> </ul>

S. No	Parameter	Source of Pollution	Proposed Mitigation Measures
			<ul style="list-style-type: none"> <li>- Any equipment emitting high noise, wherever possible, will be oriented so that the noise is directed away from sensitive receptors</li> <li>- Noise attenuation will be practiced for noisy equipment by employing suitable techniques such as acoustic controls, insulation and vibration dampers</li> <li>- High noise generating activities such as piling and drilling will be scheduled to minimize noise impacts</li> <li>- Personnel exposed to noise levels beyond threshold limits will be provided with protective gear like earplugs, muffs, etc.</li> <li>- Ambient noise levels will be monitored at regular intervals</li> </ul>
6.	Natural drainage	Material transport & construction activities	<ul style="list-style-type: none"> <li>- Adequate storm water drainage system will be provided. If natural drainage disturbed, it will be reinstated</li> </ul>
7.	Vegetation & infrastructure	Loss of vegetation and strain on existing infrastructure	<ul style="list-style-type: none"> <li>- There will be no loss of vegetation as the area does not contain any tree growth</li> <li>- Temporary workers camp will be provided with sufficient infrastructure and other provisions.</li> </ul>
8.	Existing water resources	Land Reclamation	<ul style="list-style-type: none"> <li>- Protective bunds (salt dyke) already exists which will prevent inundation of salt water to the adjoining land.</li> <li>- Return sea water will be channeled back to sea</li> </ul>
9.	Soil Quality	Solid Waste	<ul style="list-style-type: none"> <li>- Construction waste will be used within port site for filling of low lying areas.</li> <li>- Composted bio-degradable waste will be used as manure in greenbelt. Other recyclable wastes will be sold.</li> <li>- Excavated soil will be stockpiled in a corner of the site in bunded area to avoid run off with storm water.</li> <li>- General refuse generated on-site will be collected in waste skips and separated from construction waste.</li> <li>- Burning of refuse at construction sites will be prohibited</li> </ul>
10.	Human safety and property loss	Handling of hazardous materials	<ul style="list-style-type: none"> <li>- Adequate safety measures as per OHSA standards will be adopted</li> <li>- Hazardous materials such as lubricants, paints, compressed gases, and varnishes etc., will be stored as per the prescribed/approved safety norms.</li> <li>- Construction site will be secured by fencing with controlled/limited entry points.</li> <li>- Medical facilities including first aid will be available for attending to injured workers</li> <li>- Handling and storage as per Statutory guidelines</li> <li>- Positive isolation procedures will be adhered</li> </ul>
11.	Fishing activity & fishermen	Port construction works	<ul style="list-style-type: none"> <li>- Signboards will be placed at the construction activities in order to make fishermen aware of the ongoing activities and necessary marker buoys will be installed</li> <li>- Regular Interactions with the fishing communities</li> </ul>
<b>Operation Phase</b>			
1.	Air quality	Cargo handling, movement and storage	<ul style="list-style-type: none"> <li>- Use of specialized ship loaders/unloaders, wagon tippler, covered conveyors and rapid loading system through silos</li> <li>- Use of ultra-low sulphur diesel fuel is proposed</li> <li>- Dust suppression measures such as at loading/unloading points, wagon tippler complex, transfer points, stockyard, rapid loading system and at internal roads.</li> <li>- Scientific and regulated stacking of cargo piles</li> <li>- Cargo unloading through underground wagon tippers</li> </ul>



S. No	Parameter	Source of Pollution	Proposed Mitigation Measures
			<ul style="list-style-type: none"> <li>- Regularization of truck movement</li> <li>- Periodic cleaning of cargo spills,</li> <li>- Use of tarpaulin covers and speed regulations for vehicles engaged in transportation</li> <li>- Greenbelt Development</li> </ul>
2.	Noise levels	Cargo handling, movement and storage	<ul style="list-style-type: none"> <li>- Acoustic Barriers &amp; Enclosures,</li> <li>- Personal Protecting Equipment (PPE)</li> <li>- Greenbelt Development,</li> <li>- Counseling and traffic regulation</li> </ul>
3.	Marine water quality and ecology	Aqueous discharges in harbour basin	<ul style="list-style-type: none"> <li>- Ships would also comply with the MARPOL convention and are prohibited from discharging wastewater, bilge, oil wastes, etc. into the harbour waters</li> <li>- As a mitigation measure for spillages an Oil spill contingency plan will be prepared and implemented.</li> <li>- Carrier will be required to exchange ballast water in a deep sea location prior to arrival in the harbour</li> <li>- Provision of waste reception facility for bilge water and waste oil will be provided</li> </ul>
		Cargo and Oil spills	<ul style="list-style-type: none"> <li>- In case of any cargo spillage during transfer from/to ships, it will be attempted to recover the spills.</li> <li>- Oil spill control equipment such as booms/barriers will be provided for containment and skimmers will be provided for recovery</li> <li>- Response time for shutting down fuelling, containment and recovery will be quicker</li> </ul>
		Maintenance dredging	<ul style="list-style-type: none"> <li>- It will be ensured that the dumping of the maintenance dredge spoil would be uniform</li> <li>- Turtle deflectors on dredge head will be provided</li> <li>- Environmental monitoring of marine water quality, marine sediment quality &amp; marine ecology will be initiated one week prior to commencement of dredging &amp; will be carried out during dredging period</li> </ul>
4.	Water resources	Water Supply	<ul style="list-style-type: none"> <li>- Government of Odisha has accorded permission for water intake of 5 MLD from Matai River which can cater requirement for port expansion.</li> <li>- Water Treatment Plant of 5 MLD &amp; water distribution system has been developed for phase I.</li> <li>- Distribution system shall be extended to cater to the requirement of expansion project.</li> </ul>
5.	Water quality	Wastewater Discharge	<ul style="list-style-type: none"> <li>- Collection of runoff from stock piles and directing into settling ponds</li> <li>- Neutralization using lime to ensure settlement of heavy metals, if any</li> <li>- Sewage treatment plant will be provided</li> <li>- Treated wastewater from STP will be used for irrigating the greenbelt</li> </ul>
6.	Groundwater & Soil Quality	Solid Waste	<ul style="list-style-type: none"> <li>- Composted bio-degradable waste will be used as manure in greenbelt</li> <li>- Other recyclable wastes will be sold</li> </ul>
7.	Traffic Addition	Cargo movement from/to port	<ul style="list-style-type: none"> <li>- A dedicated rail corridor of 62.5 km has been developed and cargo are being transported through rail</li> <li>- A dedicated four lane road and doubling of rail link along the rail corridor has been proposed in the Phase II</li> </ul>
8.	Human safety and property loss	Handling of hazardous wastes	<ul style="list-style-type: none"> <li>- Hazardous materials will be stored as per the prescribed/approved safety norms.</li> <li>- Operational 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> </ul>

S. No	Parameter	Source of Pollution	Proposed Mitigation Measures
			<ul style="list-style-type: none"> <li>- Regular check of pipelines and tank farms</li> <li>- Recovery of spills to the maximum extent possible.</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>
9.	Fishing activity & fishermen	Vessel movements in port area	<ul style="list-style-type: none"> <li>- Creation of awareness among the fishermen about orientation of approach channel,</li> <li>- Marker buoys along the channel</li> <li>- Regular Interactions with fishing communities and resolve the conflicts, if any</li> </ul>
10.	Socio-Economic conditions of the Region	Port Operation	<ul style="list-style-type: none"> <li>- Project will help to enhance the socio-economic conditions of the area with better schooling, communication and transport facilities that will be developed / triggered as a part of overall economic development of the region</li> <li>- Offers an efficient &amp; cost effective supply chain/ value proposition to the local importers and exporters in states of Odisha, Chhattisgarh and Jharkhand.</li> <li>- Serves as an alternative gateway to ports on east coast of India for trade between North East India &amp; Asia.</li> </ul>