

DEENDAYAL PORT AUTHORITY (ERSTWHILE DEENDAYAL PORT TRUST)

Administrative Office Building Post Box NO. 50 GANDHIDHAM (Kutch). Gujarat: 370 201. Fax: (02836) 220050 Ph.: (02836) 220038

www.deendayalport.gov.in

EG/WK/4751/Hazira & Ghogha/204

To,

Expression of Interest

Sub: PREPARING AND MONITORING OF ENVIRONMENTAL MANAGEMENT PLAN FOR DEENDAYAL PORT AUTHORITY AT HAZIRA AND GHOGHA RO-RO/RO-PAX FERRY TERMINALS FOR 3 YEARS

Sir/Ma'am,

Deendayal Port Authority intends to carry out Preparing and Monitoring Of Environmental Management Plan For Deendayal Port Authority At Hazira and Ghogha Ro-Ro/Ro-Pax Ferry Terminals For 3 Years.

Kindly submit your Expression of interest along with budgetary-offer (Lump sum charges) for the subject work on the basis of broad Terms of Reference of work enclosed herewith.

The rates quoted must be inclusive of all taxes, duties for performing scope of work & exclusive of GST. The GST applicable shall be shown separately, which shall not be considered for evaluation purposes. Your Expression of interest along with budgetary offer for the above work should reach to the following address on or before 27/12/2022.

Address:

Office of Superintending Engineer (PL) Pipeline Division, Ground Floor, A.O. Building, Annexe Deendayal Port Trust, Gandhidham (Kutch)-370201.). Email ID: kptemc@gmail.com

Thanking you,

faithfully, Superintending Engineer (Pipeline)

Date: 20/12/2022

Deendayal Port Authority

Enclosed: - As above

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DEENDAYAL PORT AUTHORITY

A) Brief Summary

The Deendayal Port Authority (DPA) is the largest port in India and was commissioned in 1952. It is located on the western coast of India between 23° 01' N and 70° 13' E. DPA has commissioned Ro-Ro/Ro-Pax facilities at Hazira and Ghogha, Gujarat. This waterfront is proposed to be operated for berthing and unberthing of ROPAX Ferry vessels to load and unload vehicles along with embarking and disembarking passengers. With the start of Ro-Ro ferry service, the travel time between Ghogha and Hazira has reduced from 10 hours to 3.15 hours. The road distance from Surat to Bhavnagar is 360 kilometers. Whereas the sea route distance is 67 nautical miles only. So, Ro-Ro/Ro-Pax vessel are deployed to reduce the travel time and thereby, reduce carbon emission.

In compliance with the conditions stipulated in statutory clearances viz. Environmental/CRZ Clearance from the Ministry of Environment & Forest, CRZ Recommendations from State Forest & Environment Department and NOC from State Pollution Control Board, and to ensure implementation of project in an environmentally sustainable manner in & around the project site, it is important to monitor the environmental status and prepare an effective Environmental Monitoring and Management Plan of the port facility for sustainable development.

In this regard, Deendayal Port Authority proposes to formulate a detailed and effective environmental monitoring and management plan by conducting monthly environmental monitoring for its onward submission to GPCB, GCZMA, and MoEF&CC, GoI.

B) <u>Scope of work</u>

- i. To review the activity and fix the monitoring network (tentative locations given at Section (D)) within the impacted region in and around the Ro-Ro/Ro-Pax facilities at Hazira and Ghogha in view of the developmental project.
- ii. To assess the ambient air quality (gases and particulate matter)
- iii. To assess the DG stack emissions (gases and particulate matter)
- iv. To assess the Meteorological parameters (Wind & temperature profile, precipitation, solar radiation)
- v. To assess Drinking water quality (Physical, Chemical and Biological parameters)
- vi. To assess Soil quality (Physical and Chemical parameters)
- vii. To assess the marine environment quality (Physicochemical characteristics of water, sediment and ecological characteristics)
- viii. To monitor parameter trends by comparing the data collected over a specified period.
- ix. To interpret the results and check compliance with stipulated standards.
- x. To suggest mitigation measures and recommend future action plans, based on the findings of this study.
- xi. To formulate and finalize a detailed environmental monitoring plan in consultation with the Employer, for implementation including number of sampling, frequency, locations of stations and other relevant technical details.
- xii. Based on the monthly monitoring results, Environmental Monitoring and Management Plan may be suggested comprising mitigation measures for each environmental matrices.

C) Environmental Monitoring Parameters (Tentative Parameters)

Sr	Δir	Meteorology	DG	Noise	Soil	Water
No		Meteorology	Emissions	Noise	5011	(Drinking)
1.	PM ₁₀	Temperature	PM ₁₀	L _{eq} (Day) Total organic matter		Odour
2.	PM _{2.5}	Humidity	PM _{2.5}	L _{eq} (Night)	Organic carbon	Colour
3.	Sulphur Dioxide	Wind speed	Sulphur Dioxide		Inorganic phosphate	рН
4.	Oxides of Nitrogen	Wind direction	Oxides of Nitrogen		Texture	Turbidity
5.	Carbon Monoxide	Rainfall	Carbon Monoxide		рН	Total Dissolved Solids
6.	Hydrocarbon	Solar Radiation	Carbon Dioxide		Conductivity	Total Suspended Solids
7.	Benzene				Particle size distribution & Silt content	Conductivity
8.	Volatile organic Compound				Sodium Absorption Ratio (SAR)	Chloride
9.	Non- methane VOC				Water Holding Capacity	Calcium as Ca
10.					Aluminium	Magnesium as Mg
11.					Chromium	Total Hardness
12.					Nickel	Iron as Fe
13.					Copper	Fluoride as F
14.					Zinc	Sulphate as SO4 ⁻
15.					Cadmium	Nitrite as NO ₂
16.					Lead	Nitrate as NO ₃
17.					Mercury	Sodium as Na
18.					Arsenic	Potassium as K
19.						Manganese
20.						Chromium total, Hexavalent
21.						Copper
22.						Cadmium
23.						Arsenic
24.						Mercury
25.						Lead
26.						Zinc
27.						Salinity
28.						Free Residual Chlorine
29.						Microbiological (MPN)

Marine Environment						
Sr.	Surface water	Sediment	Marine Ecology			
No						
1.	Odour	Texture	Chlorophyll-a			
2.	Colour	Organic	Pheophytin			
		matter				
3.	рН	Inorganic	Biomass			
		Phosphate				
4.	Turbidity	Aluminium	Relative abundance, species composition,			
			and diversity of phytoplankton			
5.	Total Dissolved Solids	Silica	Relative abundance, species composition,			
			and diversity of zooplankton			
6.	Total Suspended Solids	Phosphate	Relative abundance, species composition,			
			and diversity of benthic invertebrates			
			(Meio, micro and macro benthos)			
7.	Conductivity	Sulphate	Particulate oxidisable organic carbon			
8.	Dissolved Oxygen	Nitrite	Secchi depth			
9.	Particulate Organic Carbon	Nitrate				
10.	Chemical Oxygen Demand	Calcium				
11.	Biochemical Oxygen Demand	Magnesium				
12.	Silica	Sodium				
13.	Phosphate	Potassium				
14.	Sulphate as SO4 ⁻	Chromium				
15.	Nitrite as NO ₂	Nickel				
16.	Nitrate as NO ₃	Copper				
17.	Sodium as Na	Zinc				
18.	Potassium as K	Cadmium				
19.	Manganese	Lead				
20.	Iron as Fe	Mercury				
21.	Chromium total and	Arsenic				
	Hexavalent					
22.	Copper					
23.	Cadmium					
24.	Arsenic					
25.	Mercury					
26.	Lead					
27.	Zinc					
28.	Floating material (Oil, grease					
	scum, including petroleum					
	products)					
29.	Microbiological (MPN)					
30.	Density					

Sr. No.	Parameter	Total No. of Location at Hazira and Ghogha (Tentative)	
1.	Ambient Air Monitoring	4	
2.	DG stack Emissions monitoring	Depending on the No. of DG Stack	
3.	Drinking Water Monitoring	2	
4.	Marine Water, Ecology and Sediment Monitoring	5	
5.	Noise Monitoring	4	
6.	Meteorological data monitoring	2	
7.	Soil quality monitoring	2	
8.	Oil Spill Monitoring	In case of Oil Spill	

D) Tentative Number of Locations for Monitoring

E) Monitoring Team

Sr.	Post	No. of	Qualification	Experience
No.		Post		
1	Manager (Sr.	01	Ph.D./M. Sc.	Five-year experience in
	Project		(Env. Sc.) /BE	Environmental sciences
	Scientist)		/ME (Env.) or	or equivalent
			Equivalent.	
2	Marine Biologist (Sr.	01	Ph.D./MSc. in	Five-year experience in
	Project Scientist)		Marine Sciences,	Marine Sciences,
			Botany, Zoology,	Botany, Zoology or
			or Equivalent.	equivalent
3	Lab Assistant/Chemist	02	B.Sc. (Env. Sc.)	Two Years' experience in
			Diploma (Env.)	lab testing and field
			Or Equivalent.	monitoring
4	Skilled Persons/Helper	02	10 th /12 th Pass	One/Two-year
				experience in field
				monitoring

F) <u>Time Period for Assignment:</u> 3 years

G) **Deliverables:** The consultant shall submit monthly reports as well as annual reports as specified in the table below:

Activity	Period in days	No of Prints
Preliminary survey and	07 days from the	3
submission of Preliminary report	commencement of the	
regarding monitoring cycle.	services.	
Submission of Final	10 days after approval of the	3
Environmental Monitoring Plan	preliminary report by the	
with the monitoring technical	port.	
details.		
Monthly Environmental	Every month – by the 10 th of	3
Monitoring and Management	every month for the preceding	
Plan and Submission of Progress	month. Every quarter – by	
Report indicating the status of	the 15 th of the coming month	
various activities undertaken,	for the preceding quarter.	
relevant results, and suggestions		
of preventive and corrective		
measures for non-conformities		
found, if any, as per the EMP.		
The reporting shall be done in		
the format approved by the		
Employer		
Submission of Yearly report.	Within 30 days from the	3
	completion date of the one-	
	year's monitoring period.	

H) Obligations Of Deendayal Port Authority

- a. Provisions for marine monitoring will be made
- b. No local transport will be provided.
- c. Office stationery will be borne by contractor
- d. No accommodation facilities shall be provided by DPA.

EOI PRICE BID

Appointment of Consultant for "PREPARING AND MONITORING OF ENVIRONMENTAL MANAGEMENT PLAN FOR DEENDAYAL PORT AUTHORITY AT HAZIRA AND GHOGHA RO-RO/RO-PAX FERRY TERMINALS FOR 3 YEARS":

Description	Amount in Rs.		
	Year	In fig.	In words
Yearly charges including all	1 st year		
taxes, duties for a period of 3			
years for performing			
"PREPARING AND			
MONITORING OF	2 nd year		
ENVIRONMENTAL			
MANAGEMENT PLAN FOR			
DEENDAYAL PORT			
AUTHORITY AT HAZIRA AND	3 rd year		
GHOGHA RO-RO/RO-PAX			
FERRY TERMINALS FOR 3			
YEARS".			
The amount quoted shall be			
exclusive of Goods & Service			
Tax.			
Total Rs.			

(Note:- full and final payment shall be released after final approval of advisory report)

Stamps & Signature of bidder