



Six Monthly CRZ Compliance Report (April 2024 to September 2024)

FOR

Outfitting Jetty

OF

LARSEN & TOUBRO LIMITED

AT

Hazira Manufacturing Complex, Surat, Gujarat.

Land/Plot area: 11,700 m²

[CRZ Clearance Letter No. 11-53/2012-IA-III dated: 15/01/2013]



Applicant

Larsen & Toubro Limited

Plot No: Sr. No. 148/A, 230,
Hazira Notified Area,
Surat-Hazira Road,
Hazira-394510 Tal: Chorasi
Dist: Surat
Phone: 0261 2805315
Fax: 0261-2455000

Consultant

**Ecosystem Resource
Management Pvt. Ltd.**

Office Floor, Ashoka Pavilion 'A', New Civil
Road, Surat, Gujarat.
(NABL accredited certificate No. TC-11369)
E-mail: eco@ecshripad.com
Tel No: +912612231630

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ECOSYSTEM RESOURCE MANAGEMENT PVT. LTD.

Office Floor, Ashoka Pavillion–A, Opp. Kapadia Health Club, New Civil Road, Surat–395 001.
Tele–No: 91–0261–2231630, E–mail: eco@ecoshripad.com Web: www.ecosystemindia.com

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INTRODUCTION

Larsen and Toubro Limited (L&T), Hazira Works is a heavy engineering work complex situated on a 200 acres plot at Hazira, near Surat in Gujarat. It is a state-of-the-art engineering workshop which is involved in designing and manufacturing of custom built fabricated equipment's, modules and systems required for the core sector industries of national importance viz., nuclear, defence and various process plants i.e. refineries, petrochemicals, fertilizer etc. L&T is in the forefront of India's march towards globalization.

Hazira Works was established in the year 1987. During the initial years Hazira works lacked infrastructural facilities viz. power, water, roads, communication, housing for staff & workmen, etc. With advent of other major industries like Reliance Petrochemicals and Essar Limited and after declaration of Hazira as a notified area, the situations improved in all fronts gradually over 10 years. Construction of fabrication shops, jetty and installation of major equipment provided a boost to the working capacity of Hazira works.

Today L & T has 65,000 m² of modern heavy shops and 3,00,000 m² of open fabrication facilities coupled with private jetties/load out facilities, modern offices, training centers, canteens and other industrial utilities backed by a qualified and experienced team of workmen, engineers and managers developed over last 20 years.

From the past four decades, this division has been active in design, engineering and manufacturing of critical high tech plant and equipment for the core sectors such as Steel & Cement, Fertilizers, Oil & Gas, Petrochemicals & Refinery Equipment, Nuclear Power, Aerospace and Defense.

In view of overall and general good economic situation L&T Ltd. has taken NOC, CRZ Clearance from the concerned department for "**Construction of Outfitting Jetty**".

The outfitting jetty is exclusively utilized for conducting small-scale operations, such as the maintenance and repairs of interceptor boats belonging to the Indian Coast Guard, which are berthed at the jetty site.

The Gujarat SCZMA has recommended the project vide letter no. ENV-10-2010-180-E dated 11/05/2012 and CRZ clearance has been obtained from MoEF&CC, New Delhi for the vide letter no. File. No. 11-53-2012-IA-III dated 15/01/2013. The study has been carried out to comply with the CRZ condition and environment legislation for submission of six-monthly compliance report for the same.

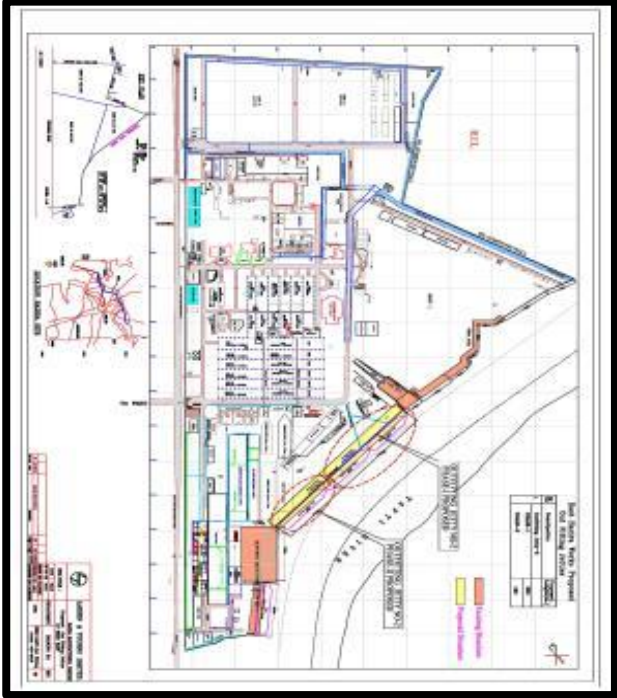


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DATA SHEET

1.	Project type: River-Valley / Mining / Industry / Thermal / Nuclear, Other (specify)	:	Construction of Outfitting jetty.
2.	Name of the project	:	Larsen and Toubro Limited
3.	Clearance letter (s) O M No and date	:	11-53/2012-IA-III dated 15/01/2013
4.	Location		
	a. District	:	Surat
	b. State	:	Gujarat
	c. Latitude / Longitude	:	Latitude: 21°09'31.99"N Longitude:72°39'57.96"E
			
5.	Address for correspondence		
	a. Address of concerned project Chief engineer (with pin code & telephone / telex/fax)	:	Mahesh Joshi Head - Central Services LARSEN & TOUBRO LIMITED,



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	number)		A.M. Naik Heavy Engineering Complex, Post Batha, Surat -394 510, Telephone:0261-2807642 E-mail-mahesh.Joshi@larsentoubro.com																																
	b. Address of Executive project engineer /Manager (with pin code /fax numbers)	:	As Above																																
6.	Salient features																																		
	a. of the project	:	<table border="1"> <thead> <tr> <th>Sr. No</th> <th>Particulars</th> <th>Name</th> <th>Aerial Distance from the project site</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Nearest Village</td> <td>Mora</td> <td>@ 2.42 km in NW direction</td> </tr> <tr> <td>2.</td> <td>Nearest Town/city</td> <td>Surat</td> <td>@ 17.50 km in E direction</td> </tr> <tr> <td>3.</td> <td>Nearest National Highway</td> <td>NH-6</td> <td>@ 0.55 km in NW direction</td> </tr> <tr> <td>4.</td> <td>Nearest State Highway</td> <td>SH-66</td> <td>@ 7.94 km in SE direction</td> </tr> <tr> <td>5.</td> <td>Nearest Railway Station</td> <td>Surat</td> <td>@ 20.00 km in NE direction</td> </tr> <tr> <td>6.</td> <td>Nearest Airport</td> <td>Surat</td> <td>@ 10.50 km in SE direction.</td> </tr> <tr> <td>7.</td> <td>River</td> <td>Tapi</td> <td>@ 0.15 km in SE direction.</td> </tr> </tbody> </table>	Sr. No	Particulars	Name	Aerial Distance from the project site	1.	Nearest Village	Mora	@ 2.42 km in NW direction	2.	Nearest Town/city	Surat	@ 17.50 km in E direction	3.	Nearest National Highway	NH-6	@ 0.55 km in NW direction	4.	Nearest State Highway	SH-66	@ 7.94 km in SE direction	5.	Nearest Railway Station	Surat	@ 20.00 km in NE direction	6.	Nearest Airport	Surat	@ 10.50 km in SE direction.	7.	River	Tapi	@ 0.15 km in SE direction.
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	b. of the environmental management plans.	:	Adequate environmental safeguards have been incorporated in EMP which was submitted to the Ministry during grant of the CRZ.																																
7.	Breakup of the project area	:	1.17 Hectare																																
	a. Submergence area: forest & non forest	:	NIL																																
	b. Others	:	NIL																																



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8.	Breakup of the project affected population with enumeration of those losing houses/dwelling units only agriculture land only, both dwelling units and agricultural land & landless laborers / artisan.																				
	a. SC.ST / Adivasis	:	NIL																		
	b. Others	:	NIL																		
9.	Financial details																				
	a. Project cost as originally planned & subsequent revised estimates and the year of price reference.	:	Proposed: Rs. 58 Crores Actual Capital Investment: 80.62 Crores																		
	b. Allocation made for environmental management plans with item-wise & year wise break up	:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Sr. No</th> <th style="width: 65%;">Particulars</th> <th style="width: 30%;">Lakhs/Annum</th> </tr> <tr> <td></td> <td></td> <th style="text-align: center;">For the year 2024-25</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td>Air Pollution Control</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">5.00</td> </tr> <tr> <td style="text-align: center;">2.</td> <td>Water Pollution Control</td> </tr> <tr> <td style="text-align: center;">3.</td> <td>Noise Abatement</td> </tr> <tr> <td style="text-align: center;">4.</td> <td>Miscellaneous</td> </tr> <tr> <td colspan="2" style="text-align: center;">Total</td> <td style="text-align: center;">5.00</td> </tr> </tbody> </table>	Sr. No	Particulars	Lakhs/Annum			For the year 2024-25	1.	Air Pollution Control	5.00	2.	Water Pollution Control	3.	Noise Abatement	4.	Miscellaneous	Total		5.00
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		For the year 2024-25																			
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4.	Miscellaneous																				
Total		5.00																			
10.	Forest Land requirement		NOT APPLICABLE																		
	a. The status of approval for diversion of forest land and non-forestry use	:																			
	b. The status of clearing falling	:																			



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	c. The status of compensatory afforestation, if any	:	
	d. Comments on the viability and sustainability of compensatory afforestation Program in the light of actual field experience so far	:	
11.	The status of clear falling in non-areas (much as submergence area of reservoir , approach roads), if any with quantitative information	:	NOT APPLICABLE
12.	The status of construction	:	
	a. Date of commencement (actual and / or planned)	:	Sep'2011
	b. Date of completion (actual) and/or planned	:	Aug' 2013
13.	Reasons for the delay if the project is yet to start	:	NOT APPLICABLE
14.	Dates of site visits	:	
	a. The dates on which the project was monitored by the Regional office on previous occasion, if any	:	GPCB RO visit has not been done in during this period of April - September 2024.
	b. Date of site visit for this monitoring report	:	Dates of sampling are mentioned in respective analysis report.
15.	Details of correspondence with project authorities for obtaining act on plans / information on status of compliance to safeguards other than the routine letters for logistic	:	Last six-monthly compliance report for the period of January 2024 to June 2024 was submitted in August 2024 to RO, MOEFCC Bhopal.



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<p>support for site visits (The first manufacturing report may contain the details of all the letters issued so far, but the letter reports may cover only the letters issued subsequently)</p>	
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COASTAL REGULATION ZONE (CRZ) CLEARANCE BY MoEFCC

No. 11-53/2012-IA-III dated: 15/01/2013



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**F. No. 11-53/2012-IA-III
Government of India
Ministry of Environment & Forests**

**Room No. 143,
Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi - 110 003.**

Dated: 15th January, 2013

**To
M/s Larson and Toubro Limited,
L&T House, Ballard Estate, P.O. Box 278,
Mumbai - 400 001, Maharashtra**

**Subject: CRZ Clearance for construction of outfitting Jetty at Hazira
Manufacturing Complex, Surat, Gujarat by M/s Larson and
Toubro Limited - Reg.**

This has reference to the letter no. No. ENV-10-2010-180-E dated 11.05.2012 from Director (Environment) & Additional Secretary, Govt. of Gujarat forwarding the above proposal for prior CRZ Clearance under the CRZ Notification, 2011. The proposal has been appraised as per prescribed procedure in the light of provisions under the CRZ Notification, 2011 on the basis of the mandatory documents enclosed with the application viz., the Questionnaire, demarcation of HTL, recommendation of Gujarat Coastal Zone Management Authority and the additional clarifications furnished in response to the observations of the Expert Appraisal Committee constituted by the competent authority in its meetings held on 9th -10th July, 2012 and 19th - 21st September, 2012.

2. It is inter-alia noted that the proposal involves development of Outfitting Jetty at Hazira Manufacturing complex, Surat. Larsen & Toubro (L&T) is a USD 12.8 billion technology, engineering, construction, manufacturing and financial services conglomerate, with global operations. The proposed Outfitting Jetty will be used for berthing of new vessels manufactured in Hazira. The outfitting of these vessels will be carried out while these are berthed at the Jetty before sea trials. Subsequently, this facility will be used for dispatch of the fabricated equipment/vessels, etc. It is also used for outfitting works of ships such as piping, electrical, engineering equipment, accommodation, deck equipment. The total power requirement with DGVCL is 1500 KVA. The total water required for domestic & construction activity is 4.0 KLD. The Sewage generated (i.e. 1 KLD) after domestic use will be treated in the STP of the existing facility of L&T HZMC.

The size of the Outfitting Jetty is as follow:

Sr. No.	Particular	Dimension of Jetty
1	Length (m)	450
2	Width (m)	26
3	Height (m)	15
4	Area (Sq.m)	11700

1



3. The Gujarat SCZMA has recommended the project vide letter No. ENV-10-2010-180-E dated 11.05.2012.

4. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, have recommended for the grant of CRZ Clearance for the project. Accordingly, the Ministry hereby accord necessary CRZ Clearance for the above project as per the provisions of CRZ Notification, 2011 subject to strict compliance of the terms and conditions as follows:

5. Specific Conditions:

- (i) "Consent for Establishment" shall be obtained from State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.
- (ii) Only outfitting of ships - which includes piping, electrical, engineering equipment, accommodation, deck equipment shall be carried out at the proposed facility.
- (iii) Project proponent shall use only precast material for construction purposes.
- (iv) There shall be no painting and sand blasting activities.
- (v) All conditions stipulated by Gujarat Coastal Zone Management Authority vide letter No. ENV-10-2010-180-E dated 11.05.2012 shall be strictly complied with.
- (vi) No ground water shall be tapped within the CRZ area.
- (vii) There shall be no disposal of solid or liquid wastes on coastal area. Solid waste Management shall be as per Municipal Solid (Management and Handling) Rules, 2000.
- (viii) There shall be no disposal of wastes in CRZ area.
- (ix) EMP/DMP shall be updated taking into the consideration of natural calamity including OM on Tsunami and submitted.
- (x) No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- (xi) It shall be ensured that the project does not lead to any shoreline changes. Periodic monitoring shall be carried out to assess the shoreline changes.



- (xii) The wastewater generated shall be treated and reused. There shall be no disposal into sea or creek.
- (xiii) Green belt with appropriate species shall be developed within the project site.
- (xiv) The site shall be kept free from pollution by providing suitable drainage system.
- (xv) The project proponent shall provide adequate funds in the Environment Management Plan of the project.
- (xvi) It shall be ensured that the fishing/fisherman communities shall not be disturbed during operation of the project.

6. General Conditions:

- (i) The construction of the structures should be undertaken as per the plans approved by the concerned local authorities/ local administration, meticulously conforming to the existing local and Central rules and regulations including the provisions of Coastal Regulation Zone Notification, 2011 and the approved Coastal Zone Management Plan of Gujarat.
- (ii) A six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bhopal regarding the implementation of the stipulated conditions.
- (iii) 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.
- (iv) The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.
- (v) 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.
- (vi) 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.
- (vii) A copy of the clearance letter shall be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/



representation has been made received while processing the proposal.

- (viii) 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.

7. These stipulations would be enforced 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, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.

8. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

9. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded CRZ Clearance and copies of clearance letters are available with the 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 Bhopal.

10. This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

11. Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.

12. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

13. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

14. 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 respective Zonal Office of CPCB and the SPCB.



15. 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.

16. 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 under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

(Lalit Kapur)
Director (IA-III)

Copy to:

1. The Principal Secretary, Department of Forests & Environment and Chairman, GCZMA, Govt. of Gujarat, Sachivalaya, Gandhinagar.
2. The Director, Forests & Environment Department, Govt. of Gujarat, Block No.14, 8th Floor, Sachivalaya, Gandhinagar – 382 010.
3. The Chairman, CPCB, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 32.
4. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhinagar-382 010.
5. The Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No. 3, Ravishankar Nagar, Bhopal-462016 (M.P.)
6. Guard File.
7. Monitoring Cell, MoEF.


(Lalit Kapur)
Director (IA-III)

**COMPLIANCE TO THE CONDITIONS STIPULATED IN COASTAL REGULATION
ZONE CLEARANCE
No. 11-53/2012-IA-III dated: 15/01/2013**




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Sr. No.	Conditions	Compliance status
A.	Specific Condition	
I.	<p>“Consent for Establishment” shall be obtained from State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.</p>	<p>Complied</p> <ul style="list-style-type: none"> L&T has obtained NOC vide order No. GPCB/CTE/SRT-2361/ID-30581/90325 dated 29/08/2011. <div data-bbox="938 491 1425 1142" style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">GUJARAT POLLUTION CONTROL BOARD Paryavaran Bhavan Sector-10-A, Gandhinagar-382 010 Phone : (079) 2322629 Fax : (079) 2323215 Website : www.gpcb.gov.in</p> <p style="text-align: center;">"Consent to Establish"</p> <p>NO: GPCB/CTE/SRT-2361/ID-30581 / 29 AUG 2011</p> <p>To, M/s. Kiran & Touba Limited, Heavy Engineering Division (HED) Hafsa Manufacturing Complex, Survey No. 148/A, 230, 241, 230/P, 231, 231/U, 230/S, 446/A, 481, VILLAGE-MORA, VILLAGE-MORA, TA: CHORYASI, DIST: SURAT-394 610</p> <p>Sub: Consent to Establish (NOC) under Section 25 of Water Act 1974 and Section 21 of Air Act 1981 Ref: Your application no-19903 dated-29/12/2010</p> <p>Sir, Without prejudice to the powers of this Board under the Water (Prevention and Control of Pollution) Act-1974, the Air Act-1981 and the Environment (Protection) Act-1986 and without reducing your responsibilities under the said Acts in any way, this is to inform you that this Board grants Consent to Establish (NOC) for setting up of an industrial plant/office at Survey No. 148/A, 230, 241, 230/P, 231, 231/U, 230/S, 446/A, 481, VILLAGE-MORA, HAZIRA IND BELT, TA: CHORYASI, DIST: SURAT for installation of following Job.</p> <p>SUBJECT TO THE FOLLOWING CONDITIONS:-</p> <ol style="list-style-type: none"> The Validity period of the order will be Five years from date of issue of this order, i.e. upto-28/12/2015 The applicant shall obtain Environment Clearance from concerned authority as per EIA Notification-2005 & shall submit to the Board with compliance. You shall have to implement recommendation incorporated in the EIA EEMP report with regard to maintain Environmental Status in that area & in line with Hazira area Master Plan. You shall have to submit copy of approval of Chief Controller of Explosives for fuel Storage & handling, updated Disaster Management Plan along with on site & off site emergency plan, compliance to respect "Noise Andon Public" and other guidelines / recommendation issued / being issued by MEF / CPCB / DDEF / GPCB/OMC from time to time. You shall have to implement adequate Environment Management System proposed in the EIA / Environmental adequacy certificate with regard to Water Pollution, Air emissions, Solid Waste and Bio-Waste. All possible efforts shall be made for rain water harvesting, reuse the effluent within the plant for green belt development and also to utilize cleaner fuel i.e. LNG / LNHG as much as possible. Unit shall obtain CRZ clearance from concerned authority. <p style="text-align: center;">GPCB/CTE/SRT-2361/ID-30581 Page 1 of 3</p> <p style="text-align: center;"><i>Clean Gujarat Green Gujarat</i></p> </div> <ul style="list-style-type: none"> L&T has also obtained CC&A Renewal vide order No. AW-131200 dated 23/09/2028.

Sr. No.	Conditions	Compliance status												
		 <p>GUJARAT POLLUTION CONTROL BOARD PARYAVARAN BHAVAN, SECTOR 10-A, GANDHINAGAR - 382010, (T) 079-23232152</p> <p>By R.P.A.D</p> <p>CONSOLIDATED CONSENT AND AUTHORIZATION (CC & A) CCA NO: AW-131200 Application Type: CCA-Renewal NO: GPCB/SUR/CCA-SRT-15361D-30881/25-0120 Date: 22/11/2025</p> <p>In exercise of the power conferred under Section-25 of the Water (Prevention and Control of Pollution) Act - 1974, under Section - 21 of the Air (Prevention and Control of Pollution) Act - 1981 and Authorization under rule (6C) of the Hazardous & Other Wastes (Management and Transboundary Movement) Rules-2016, framed under the Environment (Protection) Act-1986. And where Board has received consolidated application dated 04/10/2023 and inward No.285647 for the Consolidated Consent and Authorization (CC & A) of this Board under the provisions / rules of the aforesaid Acts, Consolidated Consent & Authorization is hereby granted as under:</p> <p>CONSOLIDATED CONSENT AND AUTHORIZATION: (Under the provisions / rules of the aforesaid Environmental Acts)</p> <p>To, M/s. Larsen & Toubro Limited Plot No. Sr. No. 148/A, 230, Hazira Notified Area, Surat - Hazira Road, Hazira - 394510, Tal: Chorasi, Dist: Surat.</p> <p>1. Consent Order No.: AW-131200 date of issue: 26/12/2023 2. The consent under Water Act-1974, Air Act-1981 & Authorization under Environment (Protection) Act, 1986 shall be valid up to 23/09/2028 to operate industrial plant for manufacturing of the following products.</p> <table border="1" data-bbox="971 674 1393 751"> <thead> <tr> <th>Sr. No.</th> <th>List of Products</th> <th>Quantity</th> <th>Unit</th> <th>CAS No.</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Quilt Juty-2</td> <td>1.000</td> <td>Not Specified</td> <td></td> <td>Dimension: Length - 4500mm, Width - 30mm, Height - 15 mm and Area - 13750 sq</td> </tr> </tbody> </table> <p>INDUSTRY SPECIFIC CONDITION: (I) Industry shall manage Solid Wastes generated from industrial activities as per Solid Waste Management Rules-2016 (solid waste as defined in Rule-3(46)). (II) Industry shall obtain NOC from CGWA as per order of Hon. National Green Tribunal for the withdrawal of ground water: If Applicable</p> <p>GPCB ID:30881, Inward ID:285647 Clean Gujarat Green Gujarat Website : https://gpcb.gujarat.gov.in</p>	Sr. No.	List of Products	Quantity	Unit	CAS No.	Remark	1	Quilt Juty-2	1.000	Not Specified		Dimension: Length - 4500mm, Width - 30mm, Height - 15 mm and Area - 13750 sq
Sr. No.	List of Products	Quantity	Unit	CAS No.	Remark									
1	Quilt Juty-2	1.000	Not Specified		Dimension: Length - 4500mm, Width - 30mm, Height - 15 mm and Area - 13750 sq									
ii.	Only outfitting of ships – which include piping, electrical, engineering equipment, accommodation, deck equipment shall be carried out at the proposed facility.	<p>Complied</p> <ul style="list-style-type: none"> Facility is used only for conducting small-scale operations, such as the maintenance and repairs of interceptor boats belonging to the Indian Coast Guard, which are berthed at the jetty site. 												
iii.	Project proponent shall use only precast material for construction purposes.	<p>Complied</p> <ul style="list-style-type: none"> Only precast materials have been used for construction purpose. 												
iv.	There shall be no painting and sand blasting activities.	<p>Complied</p> <ul style="list-style-type: none"> No painting or sand blasting activities is being carried out at project site. 												
v.	All the conditions stipulated by the Environment Department, Government of Gujarat vide their letter No. ENV-10-2010-180-E dated 11.05.2012 should be strictly complied with.	<p>Complied</p> <ul style="list-style-type: none"> All the conditions stipulated in letter No. ENV-10-2010-180-E dated 11.05.2012 are strictly complied. 												
vi.	No ground water shall be tapped within the CRZ area.	<p>Complied</p> <ul style="list-style-type: none"> Company has not tapped ground water within the 												

Sr. No.	Conditions	Compliance status
		CRZ area.
vii.	There shall be no disposal of solid or liquid wastes on coastal area. Solid waste Management shall be as per Municipal Solid (Management and Handling) Rules, 2000.	<p>Complied</p> <ul style="list-style-type: none"> • No solid or liquid wastes are disposed on coastal area. • Solid waste is disposed as per Municipal Solid (Management and Handling) Rules, 2016.
viii.	There shall be no disposal of wastes in CRZ area.	<p>Complied</p> <ul style="list-style-type: none"> • No solid or liquid wastes are disposed on coastal area. • There is no disposal of wastes in CRZ area.
ix.	EMP/DMP shall be updated taking into the consideration of natural calamity including OM on Tsunami and submitted.	<p>Complied</p> <ul style="list-style-type: none"> • EMP/DMP is updated regularly taking into the consideration of natural calamity including OM on Tsunami and has been submitted.
x.	No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone Area.	<p>Complied</p> <ul style="list-style-type: none"> • No construction work other than those permitted in Coastal Regulation Zone Notification has been carried out in Coastal Regulation Zone Area.
xi.	It shall be ensured that the project does not lead to any shoreline changes. Periodic monitoring shall be carried out to assess the shoreline changes.	<p>Noted & Agreed</p> <ul style="list-style-type: none"> • All the necessary measures are taken that project does not lead to any shoreline changes. • Periodic monitoring is carried out regularly to assess the shoreline changes.
xii.	The wastewater generated shall be treated and reused. There shall be no disposal into sea or creek.	<p>Complied</p> <ul style="list-style-type: none"> • There is no wastewater generation from Industrial process and as well as domestic sewage.
xiii.	Green belt with appropriate species shall be developed within the project site.	<p>Noted & Agreed</p>

Sr. No.	Conditions	Compliance status															
xiv.	The site shall be kept free from pollution by providing suitable drainage system.	<p>Complied</p> <ul style="list-style-type: none"> Company has already provided drainage system for efficient management of storm water with adequate capacity to prevent over flooding during heavy rains. 															
xv.	The project proponent shall provide adequate funds in the Environmental Management Plan of the project.	<p>Complied</p> <table border="1" data-bbox="824 541 1503 989"> <thead> <tr> <th data-bbox="824 541 906 653">Sr. No</th> <th data-bbox="906 541 1279 653">Particulars</th> <th data-bbox="1279 541 1503 653">Cost (Lakhs/Annum)</th> </tr> </thead> <tbody> <tr> <td data-bbox="824 653 906 722">1.</td> <td data-bbox="906 653 1279 722">Air Pollution Control</td> <td data-bbox="1279 653 1503 926" rowspan="4" style="text-align: center; vertical-align: middle;">5.0</td> </tr> <tr> <td data-bbox="824 722 906 791">2.</td> <td data-bbox="906 722 1279 791">Water Pollution Control</td> </tr> <tr> <td data-bbox="824 791 906 861">3.</td> <td data-bbox="906 791 1279 861">Noise Abatement</td> </tr> <tr> <td data-bbox="824 861 906 926">4.</td> <td data-bbox="906 861 1279 926">Miscellaneous</td> </tr> <tr> <td colspan="2" data-bbox="824 926 1279 989" style="text-align: center;">Total</td> <td data-bbox="1279 926 1503 989" style="text-align: center;">5.00</td> </tr> </tbody> </table>	Sr. No	Particulars	Cost (Lakhs/Annum)	1.	Air Pollution Control	5.0	2.	Water Pollution Control	3.	Noise Abatement	4.	Miscellaneous	Total		5.00
Sr. No	Particulars	Cost (Lakhs/Annum)															
1.	Air Pollution Control	5.0															
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3.	Noise Abatement																
4.	Miscellaneous																
Total		5.00															
xvi.	It shall be ensured that the fishing/ fisherman communities shall not be disturbed during operation of the project.	<p>Complied</p> <ul style="list-style-type: none"> There is no fishing activity near the project area. 															
B.	General Conditions																
i.	The construction of the structures should be undertaken as per the plans approved by the concerned local authorities/ local administration, meticulously conforming to the existing local and Central rules and regulations including the provisions of Coastal Regulation Zone Notification, 2011 and the approved Coastal Zone Management Plan of Gujarat.	<p>Complied</p> <ul style="list-style-type: none"> The said facility has been constructed conforming to the existing central/ local rules and regulations. 															
ii.	A six-monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bhopal regarding the implementation of the stipulated conditions.	<p>Complied</p> <ul style="list-style-type: none"> Six monthly compliance report along with monitoring data are regularly submitted to the Environment Department, Government of Gujarat and Regional office, Bhopal. 															

Sr. No.	Conditions	Compliance status
iii.	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.	<p>Noted & Agreed</p> <ul style="list-style-type: none"> • Company will comply with the condition to be stipulated subsequently by the MoEF&CC or any other competent authority, if necessary in the interest of environment.
iv.	The ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry	<p>Noted & Agreed.</p>
v.	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.	<p>Agreed</p> <ul style="list-style-type: none"> • In the event of a change in the project, company will make a fresh-reference to the MoEF&CC for modification in the clearance conditions.
vi.	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.	<p>Agreed</p> <ul style="list-style-type: none"> • We will do the needful when required.
vii.	A copy of the clearance letter will be marked to the concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	<p>Complied</p> <ul style="list-style-type: none"> • Copy of clearance was marked to NGO/ Gram Panchayat. No suggestion received yet from Panchayat/local NGO, we will do as and when required.
viii.	State Pollution Control board shall, display copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office/Tehsildar's office for 30 days.	<p>Complied</p> <ul style="list-style-type: none"> • GPCB has displayed a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office/Tehsildar's office for 30 days.
C.	General Point	
1.	These stipulations would be enforced among others under the provisions of Water	<p>Noted & Agreed to Comply.</p>

Sr. No.	Conditions	Compliance status
	(Prevention and Control of Pollution) Act 1974, the Air (Prevention 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.	
2.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	Not Applicable
3.	The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded CRZ Clearance and copies of clearance letters are available with the 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 of Bhopal.	<p>Complied</p> <ul style="list-style-type: none"> • Information on Environmental Clearance for new projects was advertised in two local newspapers as detailed below and also sent to Regional Office, GPCB. <ol style="list-style-type: none"> 1. Gujarat Samachar - 05/04/2013 2. Indian Express – 05/04/2013

Sr. No.	Conditions	Compliance status
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4.	This clearance of subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be
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Gujarat & Samachar Date: 5/4/13 (Friday)

The Indian EXPRESS Date: 5/4/13 (Friday)

Noted & Agreed.	
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Sr. No.	Conditions	Compliance status																												
	applicable to this project.																													
5.	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.	Noted.																												
6.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/ Municipal Corporation, Urban Local Body and Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on website of the company by the proponent.	Noted. <ul style="list-style-type: none"> Copy of clearance was marked to Panchayat/ local NGO and no suggestion received yet from Panchayat/ local NGO, we will do as and when required. 																												
7.	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Agreed.																												
8.	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 respective Zonal Office of CPCB and the SPCB.	Noted & Agreed. <ul style="list-style-type: none"> Monthly Environmental monitoring has been done by NABL and MoEF&CC approved laboratory and the reports have been attached in Annexures. Monthly ambient air monitoring has been carried out and summary of the same is attached as under. Analysis reports of the ambient air monitoring are attached as Annexure-1. <table border="1" data-bbox="818 1633 1515 1919"> <thead> <tr> <th colspan="2" data-bbox="818 1633 1013 1749">LOCATION</th> <th data-bbox="1013 1633 1146 1749">PM_{2.5} (mg/m³)</th> <th data-bbox="1146 1633 1279 1749">PM₁₀ (mg/m³)</th> <th data-bbox="1279 1633 1409 1749">SO₂ (mg/m³)</th> <th data-bbox="1409 1633 1515 1749">NO_x (mg/m³)</th> </tr> </thead> <tbody> <tr> <td data-bbox="818 1749 932 1843" rowspan="2">Near Main Gate</td> <td data-bbox="932 1749 1013 1791">Min</td> <td data-bbox="1013 1749 1146 1791">33.6</td> <td data-bbox="1146 1749 1279 1791">64.2</td> <td data-bbox="1279 1749 1409 1791">10.3</td> <td data-bbox="1409 1749 1515 1791">16.7</td> </tr> <tr> <td data-bbox="932 1791 1013 1843">Max</td> <td data-bbox="1013 1791 1146 1843">40.2</td> <td data-bbox="1146 1791 1279 1843">76.4</td> <td data-bbox="1279 1791 1409 1843">12.5</td> <td data-bbox="1409 1791 1515 1843">20.6</td> </tr> <tr> <td data-bbox="818 1843 932 1919" rowspan="2">Jetty2</td> <td data-bbox="932 1843 1013 1885">Min</td> <td data-bbox="1013 1843 1146 1885">33.5</td> <td data-bbox="1146 1843 1279 1885">64.2</td> <td data-bbox="1279 1843 1409 1885">9.8</td> <td data-bbox="1409 1843 1515 1885">18.4</td> </tr> <tr> <td data-bbox="932 1885 1013 1919">Max</td> <td data-bbox="1013 1885 1146 1919">43.5</td> <td data-bbox="1146 1885 1279 1919">69.5</td> <td data-bbox="1279 1885 1409 1919">14.9</td> <td data-bbox="1409 1885 1515 1919">19.3</td> </tr> </tbody> </table>	LOCATION		PM _{2.5} (mg/m ³)	PM ₁₀ (mg/m ³)	SO ₂ (mg/m ³)	NO _x (mg/m ³)	Near Main Gate	Min	33.6	64.2	10.3	16.7	Max	40.2	76.4	12.5	20.6	Jetty2	Min	33.5	64.2	9.8	18.4	Max	43.5	69.5	14.9	19.3
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	Max	43.5	69.5	14.9	19.3																									

Sr. No.	Conditions	Compliance status					
		Shop 1	Min	40.9	80.5	12.5	18.8
			Max	41.9	84.3	17.5	22.4
			Min	33.9	68.7	10.5	20.2
		Jetty 1	Max	36.4	78.5	13.1	22.4
		<ul style="list-style-type: none"> Overall ambient noise level was found in the range of 64 – 73 dB (A) in day time and 56 – 70 dB (A) in night time. During day time & night time, all results were well within the prescribed limit. Noise level monitoring reports are attached as Annexure-2 and summary of the same is tabulated as below. 					
		Location				Day Time dB(A)	Night Time dB(A)
		MC Shop	0.5 m	Min	68	59	
	Max			70	65		
		Nr. ADM Building	10 m	Min	64	56	
	Max			66	60		
		Nr. Jetty 2	10 m	Min	70	68	
	Max			72	69		
		Nr. Jetty 1	5 m	Min	68	66	
	Max			73	70		
		Nr. Ware House (Paint)	0.5 m	Min	66	60	
	Max			72	64		
		Nr. STP	5 m	Min	67	64	
	Max			70	64		
		Nr. Canteen	0.5 m	Min	66	60	
	Max			66	62		
		Nr. Gate 2	5 m	Min	64	60	
	Max			70	65		
		Nr. SHBD Shop -1	1 m	Min	69	64	
	Max			71	66		
9.	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	<p>Complied</p> <ul style="list-style-type: none"> Six monthly compliance report along with monitoring data are regularly submitted to the Environment Department, Government of Gujarat and Regional office, Bhopal. 					

Sr. No.	Conditions	Compliance status
	respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	
10.	The environmental statement for each financial year ending 31 st March in Form-V as in mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	<p>Complied</p> <ul style="list-style-type: none"> • Environmental statement for each financial year in Form – V is being submitted to GPCB and uploaded on GPCB XGN portal.

SUMMARY

L&T has 65,000 m² of modern heavy shops and 3,00,000 m² of open fabrication facilities coupled with private jetties/load out facilities, modern offices, training centers, canteens and other industrial utilities at Hazira backed by a qualified and experienced team of workmen, engineers and managers developed over last 20 years.

L&T has obtained NOC, CC&A & CRZ Clearance from the concerned department for Construction of Outfitting Jetty. The Outfitting jetty is used for berthing of new vessels manufactured in Hazira. The outfitting of these vessels is carried out while these are berthed at jetty before sea trials. Subsequently, this facility is used for dispatch of the fabricated equipment/vessels, etc. it is also used for outfitting works of ships such as piping, electrical, engineering equipment, accommodation, deck equipment.

The industry has awarded contract for the Environmental monitoring and preparation of six monthly CRZ compliance report to Ecosystem Resource Management Pvt. Ltd. The consultancy firm has its own well equipped laboratory to measure the pollution parameters related to Environmental Monitoring (Air, Water, Wastewater, Soil) with National Accreditation Board for Testing and Calibration Laboratories (NABL) accreditation & approved by MoEF&CC. All monitoring equipment's are available to measure Stack emissions, Ambient Air quality and noise level of various plants.

Six monthly compliance report along with monitoring data are regularly submitted to the concerned department and during monitoring period of this report, RO visit was not undertaken during this period.

All the conditions stipulated in CRZ clearance were complied by the project proponent during construction phase as well as operation phase.

MEMBERS ASSOCIATED WITH REPORT

Project Proponent

Mahesh Joshi

Head - Central Services

LARSEN & TOUBRO LIMITED,

A.M. Naik Heavy Engineering Complex,

Post Batha Surat -394 510,

Telephone: 0261-2807642

E-mail – Mahesh.Joshi@larsentoubro.com

Team Leader

Mrs. Rekha Shah (Director – Ecosystem Resource Management Pvt. Ltd.)

Team Members (ERM):

Environmental Monitoring & : Team Leader – Mr. Krishna Patel
Data Collection : Team Members – Mr. Harpalsinh Sangdot
Sample Analysis : Lab. In charge – Mr. Sunil Kumar Pandey
Chemist – Mr. Bharat Patel
Report Prepared By : Mr. Harpalsinh Sangdot
Report Checked By : Mr. Rajat Gondaliya
Report Approved By : Mrs. Rekha Shah

Annexure - 1. Ambient Air Quality Monitoring Reports



Issue Date: 11/04/2024

TEST REPORT
AMBIENT AIR QUALITY MONITORING REPORT
TEST REPORT NO:QF/7.8/01 B/AMBIENT/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Ambient Air Quality Monitoring
Sample Collected On	: 01/04/2024
Sample Received on	: 02/04/2024
Sample Analyzed& Completion	: 02/04/2024 & 03/04/2024
Quantity/No. of Sample	: 1-1 no. of filter paper for PM ₁₀ & PM _{2.5} , approx. 25 ml exposed scrubbing media for SO ₂ and NO _x in 1-1 no. of polyethylene bottle. /16 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Height from Ground Level (m)	: 3.0
Average Wind speed (Km/hr)	: 6.3
Average Temperature (°C)	: 30.0
Average Humidity (%)	: 32.0
Dominant wind direction	: WSW
Sampling Procedure	: As per Test method given for the following parameters & instrument manual
Sample Collected By	: ERM Team

Sr. No.	Location	Parameters			
		Fine Particulate Matter (PM _{2.5}) µg/m ³	RSPM (PM ₁₀) µg/m ³	Sulphur Dioxide (SO ₂) µg/m ³	Oxides of Nitrogen (NO ₂) µg/m ³
1.	Near Main Gate	37.8	76.4	12.5	20.6
2.	Jetty 2	43.5	68.7	14.9	18.9
3.	Shop 1	40.9	80.5	17.5	22.4
4.	Jetty 1	36.4	71.3	12.8	20.7
GPCB Limit		60	100	80	80
Test Method		IS 5182 (Part 24):2019	IS 5182 (Part 23) : 2006	IS 5182 (Part 2) : 2001	IS 5182 (Part 6) :2006

Note: (1) These results relate to the sample tested only.

(2) The report shall not be reproduced except in full without written approval of the laboratory.

CHEMIST

AUTHORIZED SIGNATORY
(Haresh Ahir)

Head Off.: Office Floor, Ashoka Pavillion-A, Opp. Kapadia Health Club, New Civil Road, SURAT-395 001.

Lab : 209, 4th Floor, Siddhivinayak Platinum, Althan Pandesara BRTS Road, Bamroli, SURAT-394 210.

Head Off Phone : +91-8460545050 **Lab Phone :** +91-0261-4610580

E-mail : eco@ecoshripad.com **Website :** www.ecosystemindia.com



Issue Date: 11/05/2024

TEST REPORT
AMBIENT AIR QUALITY MONITORING REPORT
TEST REPORT NO:QF/7.8/01 B/AMBIENT/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Ambient Air Quality Monitoring
Sample Collected On	: 01/05/2024
Sample Received on	: 02/05/2024
Sample Analyzed & Completion	: 02/05/2024 & 03/05/2024
Quantity/No. of Sample	: 1-1 no. of filter paper for PM ₁₀ & PM _{2.5} , approx. 25 ml exposed scrubbing media for SO ₂ and NO _x in 1-1 no. of polyethylene bottle. /16 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Height from Ground Level (m)	: 3.0
Average Wind speed (Km/hr)	: 10.3
Average Temperature (°C)	: 33.0
Average Humidity (%)	: 23.0
Dominant wind direction	: SW
Sampling Procedure	: As per Test method given for the following parameters & instrument manual
Sample Collected By	: ERM Team

Sr. No.	Location	Parameters			
		Fine Particulate Matter (PM _{2.5}) µg/m ³	RSPM (PM ₁₀) µg/m ³	Sulphur Dioxide (SO ₂) µg/m ³	Oxides of Nitrogen (NO ₂) µg/m ³
1.	Near Main Gate	33.6	64.2	10.3	16.7
2.	Jetty 2	36.8	69.5	9.8	18.4
3.	Shop 1	41.9	84.3	13.9	19.6
4.	Jetty 1	36.4	78.5	10.5	20.2
GPCB Limit		60	100	80	80
Test Method		IS 5182 (Part 24):2019	IS 5182 (Part 23) : 2006	IS 5182 (Part 2) : 2001	IS 5182 (Part 6) :2006

Note: (1) These results relate to the sample tested only.

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Issue Date: 12/06/2024

TEST REPORT
AMBIENT AIR QUALITY MONITORING REPORT
TEST REPORT NO:QF/7.8/01 B/AMBIENT/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Ambient Air Quality Monitoring
Sample Collected On	: 01/06/2024
Sample Received on	: 03/06/2024
Sample Analyzed& Completion	: 03/06/2024 & 04/06/2024
Quantity/No. of Sample	: 1-1 no. of filter paper for PM ₁₀ & PM _{2.5} , approx. 25 ml exposed scrubbing media for SO ₂ and NO _x in 1-1 no. of polyethylene bottle. /16 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Height from Ground Level (m)	: 3.0
Average Wind speed (Km/hr)	: 17.3
Average Temperature (°C)	: 35.0
Average Humidity (%)	: 47.0
Dominant wind direction	: SSW
Sampling Procedure	: As per Test method given for the following parameters & instrument manual
Sample Collected By	: ERM Team

Sr. No.	Location	Parameters			
		Fine Particulate Matter (PM _{2.5}) µg/m ³	RSPM (PM ₁₀) µg/m ³	Sulphur Dioxide (SO ₂) µg/m ³	Oxides of Nitrogen (NO ₂) µg/m ³
1.	Near Main Gate	40.2	76.4	10.3	18.5
2.	Jetty 2	33.5	64.2	11.9	19.3
3.	Shop 1	41.1	83.5	12.5	18.8
4.	Jetty 1	33.9	68.7	13.1	22.4
GPCB Limit		60	100	80	80
Test Method		IS 5182 (Part 24):2019	IS 5182 (Part 23) : 2006	IS 5182 (Part 2) : 2001	IS 5182 (Part 6) :2006

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TEST REPORT
AMBIENT AIR QUALITY MONITORING REPORT
TEST REPORT NO:QF/7.8/01 B/AMBIENT/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Ambient Air Quality Monitoring
Sample Collected On	: 03/07/2024
Sample Received on	: 04/07/2024
Sample Analyzed& Completion	: 04/07/2024 & 05/07/2024
Quantity/No. of Sample	: 1-1 no. of filter paper for PM ₁₀ & PM _{2.5} , approx. 25 ml exposed scrubbing media for SO ₂ and NO _x in 1-1 no. of polyethylene bottle. /16 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Height from Ground Level (m)	: 3.0
Average Wind speed (Km/hr)	: 14.0
Average Temperature (°C)	: 30.0
Average Humidity (%)	: 79.0
Dominant wind direction	: S
Sampling Procedure	: As per Test method given for the following parameters & instrument manual
Sample Collected By	: ERM Team

Sr. No.	Location	Parameters			
		Fine Particulate Matter (PM _{2.5}) µg/m ³	RSPM (PM ₁₀) µg/m ³	Sulphur Dioxide (SO ₂) µg/m ³	Oxides of Nitrogen (NO ₂) µg/m ³
1.	Near Main Gate	35.4	75.2	16.7	23.4
2.	Jetty 2	38.2	78.4	19.6	25.2
3.	Shop 1	42.0	75.0	18.5	24.8
4.	Jetty 1	34.6	68.8	15.2	22.0
GPCB Limit		60	100	80	80
Test Method		IS 5182 (Part 24):2019	IS 5182 (Part 23) : 2006	IS 5182 (Part 2) : 2001	IS 5182 (Part 6) :2006

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Issue Date: 02/09/2024

TEST REPORT
AMBIENT AIR QUALITY MONITORING REPORT
TEST REPORT NO:QF/7.8/01 B/AMBIENT/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Ambient Air Quality Monitoring
Sample Collected On	: 01/08/2024
Sample Received on	: 02/08/2024
Sample Analyzed& Completion	: 02/08/2024 & 03/08/2024
Quantity/No. of Sample	: 1-1 no. of filter paper for PM ₁₀ & PM _{2.5} , approx. 25 ml exposed scrubbing media for SO ₂ and NO _x in 1-1 no. of polyethylene bottle. /16 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Height from Ground Level (m)	: 3.0
Average Wind speed (Km/hr)	: 12.0
Average Temperature (°C)	: 28.0
Average Humidity (%)	: 86.0
Dominant wind direction	: S
Sampling Procedure	: As per Test method given for the following parameters & instrument manual
Sample Collected By	: ERM Team

Sr. No.	Location	Parameters			
		Fine Particulate Matter (PM _{2.5}) µg/m ³	RSPM (PM ₁₀) µg/m ³	Sulphur Dioxide (SO ₂) µg/m ³	Oxides of Nitrogen (NO ₂) µg/m ³
1.	Near Main Gate	34.2	78.8	16.4	20.7
2.	Jetty 2	30.8	68.6	15.9	18.5
3.	Shop 1	38.9	78.8	22.2	24.8
4.	Jetty 1	36.4	72.5	16.0	19.2
GPCB Limit		60	100	80	80
Test Method		IS 5182 (Part 24):2019	IS 5182 (Part 23) : 2006	IS 5182 (Part 2) : 2001	IS 5182 (Part 6) :2006

Note: (1) These results relate to the sample tested only.

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Issue Date: 01/10/2024

TEST REPORT
AMBIENT AIR QUALITY MONITORING REPORT
TEST REPORT NO:QF/7.8/01 B/AMBIENT/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Ambient Air Quality Monitoring
Sample Collected On	: 02/09/2024
Sample Received on	: 03/09/2024
Sample Analyzed & Completion	: 03/09/2024 & 04/09/2024
Quantity/No. of Sample	: 1-1 no. of filter paper for PM ₁₀ & PM _{2.5} , approx. 25 ml exposed scrubbing media for SO ₂ and NO _x in 1-1 no. of polyethylene bottle. /16 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Height from Ground Level (m)	: 3.0
Average Wind speed (Km/hr)	: 9.3
Average Temperature (°C)	: 27.0
Average Humidity (%)	: 85.0
Dominant wind direction	: W
Sampling Procedure	: As per Test method given for the following parameters & instrument manual
Sample Collected By	: ERM Team

Sr. No.	Location	Parameters			
		Fine Particulate Matter (PM _{2.5}) µg/m ³	RSPM (PM ₁₀) µg/m ³	Sulphur Dioxide (SO ₂) µg/m ³	Oxides of Nitrogen (NO ₂) µg/m ³
1.	Near Main Gate	38.5	72.5	20.5	24.2
2.	Jetty 2	32.8	74.2	16.0	20.6
3.	Shop 1	34.2	77.2	19.5	25.2
4.	Jetty 1	38.0	76.8	18.2	23.0
GPCB Limit		60	100	80	80
Test Method		IS 5182 (Part 24):2019	IS 5182 (Part 23) : 2006	IS 5182 (Part 2) : 2001	IS 5182 (Part 6) :2006

Note: (1) These results relate to the sample tested only.

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Annexure – 2. Noise Level Monitoring Reports



Issue Date: 27/04/2024

TEST REPORT
NOISE LEVEL MONITORING REPORT
TEST REPORT NO:QF/7.8/01 D/NOISE/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Noise Level Monitoring
Date of Monitoring	: 17/04/2024
Quantity/No. of Observations	: 9 stations/18 observations
Protocol (Purpose)	: As per Work Order
Sampling Method	: Instrument's Manual & IS 9989 : 1981 Reaffirmed 2020
Noise level monitored by	: ERM Team

Sr. No.	Location	Distance from the source	Day Time	Night Time
			dB (A) 14:00 to 15:00 hr	dB (A) 22:00 to 23:00 hr
1.	MC Shop	0.5 m	69	59
2.	Nr. ADM Building	10 m	64	56
3.	Jetty 2	10 m	70	68
4.	Jetty 1	5 m	73	70
5.	Ware House (Paint)	0.5 m	66	63
6.	STP	5 m	70	64
7.	Canteen	0.5 m	66	62
8.	Gate 2	5 m	64	60
9.	SHBD Shop- I	1 m	71	66
GPCB LIMIT			75	70

Note: (1) These results relate to the measurement taken at a time for particular place.

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Issue Date: 28/05/2024

TEST REPORT
NOISE LEVEL MONITORING REPORT
TEST REPORT NO:QF/7.8/01 D/NOISE/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Noise Level Monitoring
Date of Monitoring	: 18/05/2024
Quantity/No. of Observations	: 9 stations/18 observations
Protocol (Purpose)	: As per Work Order
Sampling Method	: Instrument's Manual & IS 9989 : 1981 Reaffirmed 2020
Noise level monitored by	: ERM Team

Sr. No.	Location	Distance from the source	Day Time	Night Time
			dB (A) 14:00 to 15:00 hr	dB (A) 22:00 to 23:00 hr
1.	MC Shop	0.5 m	68	65
2.	Nr. ADM Building	10 m	64	60
3.	Jetty 2	10 m	72	69
4.	Jetty 1	5 m	72	70
5.	Ware House (Paint)	0.5 m	70	64
6.	STP	5 m	67	64
7.	Canteen	0.5 m	66	60
8.	Gate 2	5 m	68	62
9.	SHBD Shop- I	1 m	70	66
GPCB LIMIT			75	70

Note: (1) These results relate to the measurement taken at a time for particular place.

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Issue Date: 02/07/2024

TEST REPORT
NOISE LEVEL MONITORING REPORT
TEST REPORT NO:QF/7.8/01 D/NOISE/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Noise Level Monitoring
Date of Monitoring	: 22/06/2024
Quantity/No. of Observations	: 9 stations/18 observations
Protocol (Purpose)	: As per Work Order
Sampling Method	: Instrument's Manual & IS 9989 : 1981 Reaffirmed 2020
Noise level monitored by	: ERM Team

Sr. No.	Location	Distance from the source	Day Time dB (A) 14:00 to 15:00 hr	Night Time dB (A) 22:00 to 23:00 hr
1.	MC Shop	0.5 m	70	60
2.	Nr. ADM Building	10 m	66	58
3.	Jetty 2	10 m	72	68
4.	Jetty 1	5 m	68	66
5.	Ware House (Paint)	0.5 m	72	60
6.	STP	5 m	70	64
7.	Canteen	0.5 m	66	60
8.	Gate 2	5 m	70	65
9.	SHBD Shop- I	1 m	69	64
GPCB LIMIT			75	70

Note: (1) These results relate to the measurement taken at a time for particular place.

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Issue Date: 01/08/2024

TEST REPORT
NOISE LEVEL MONITORING REPORT
TEST REPORT NO:QF/7.8/01 D/NOISE/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Noise Level Monitoring
Date of Monitoring	: 18/07/2024
Quantity/No. of Observations	: 9 stations/18 observations
Protocol (Purpose)	: As per Work Order
Sampling Method	: Instrument's Manual & IS 9989 : 1981 Reaffirmed 2020
Noise level monitored by	: ERM Team

Sr. No.	Location	Distance from the source	Day Time dB (A) 14:00 to 15:00 hr	Night Time dB (A) 22:00 to 23:00 hr
1.	MC Shop	0.5 m	69	55
2.	Nr. ADM Building	10 m	62	56
3.	Jetty 2	10 m	71	66
4.	Jetty 1	5 m	74	68
5.	Ware House (Paint)	0.5 m	70	65
6.	STP	5 m	72	66
7.	Canteen	0.5 m	66	58
8.	Gate 2	5 m	69	52
9.	SHBD Shop- I	1 m	72	64
GPCB LIMIT			75	70

Note: (1) These results relate to the measurement taken at a time for particular place.

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Issue Date: 02/09/2024

TEST REPORT
NOISE LEVEL MONITORING REPORT
TEST REPORT NO:QF/7.8/01 D/NOISE/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Noise Level Monitoring
Date of Monitoring	: 16/08/2024
Quantity/No. of Observations	: 9 stations/18 observations
Protocol (Purpose)	: As per Work Order
Sampling Method	: Instrument's Manual & IS 9989 : 1981 Reaffirmed 2020
Noise level monitored by	: ERM Team

Sr. No.	Location	Distance from the source	Day Time	Night Time
			dB (A) 14:00 to 15:00 hr	dB (A) 22:00 to 23:00 hr
1.	MC Shop	0.5 m	60	55
2.	Nr. ADM Building	10 m	57	53
3.	Jetty 2	10 m	72	61
4.	Jetty 1	5 m	69	59
5.	Ware House (Paint)	0.5 m	68	59
6.	STP	5 m	67	58
7.	Canteen	0.5 m	63	52
8.	Gate 2	5 m	64	55
9.	SHBD Shop- I	1 m	73	65
GPCB LIMIT			75	70

Note: (1) These results relate to the measurement taken at a time for particular place.

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Issue Date: 01/10/2024

TEST REPORT
NOISE LEVEL MONITORING REPORT
TEST REPORT NO:QF/7.8/01 D/NOISE/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Noise Level Monitoring
Date of Monitoring	: 16/09/2024
Quantity/No. of Observations	: 9 stations/18 observations
Protocol (Purpose)	: As per Work Order
Sampling Method	: Instrument's Manual & IS 9989 : 1981 Reaffirmed 2020
Noise level monitored by	: ERM Team

Sr. No.	Location	Distance from the source	Day Time	Night Time
			dB (A) 14:00 to 15:00 hr	dB (A) 22:00 to 23:00 hr
1.	MC Shop	0.5 m	68	61
2.	Nr. ADM Building	10 m	60	55
3.	Jetty 2	10 m	69	62
4.	Jetty 1	5 m	70	61
5.	Ware House (Paint)	0.5 m	67	58
6.	STP	5 m	69	60
7.	Canteen	0.5 m	63	55
8.	Gate 2	5 m	66	57
9.	SHBD Shop- I	1 m	72	63
GPCB LIMIT			75	70

Note: (1) These results relate to the measurement taken at a time for particular place.

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Annexure – 3. Marine Water Sample Analysis Reports



TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 01/04/2024
Sample Received on	: 02/04/2024
Sample Analyzed & Completion	: 02/04/2024 to 09/04/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	25	25	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	7.99	8.10	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	12	18	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	32	88	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1840	2216	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	80	118	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	399	467	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	150	188	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	6.2	15.9	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	578	682	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.5	0.8	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.3	0.7	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	<2	<2	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.3	0.5	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.05	0.07	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.2	0.4	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.1	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

Note: (1) These results relate to the sample tested only.

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 01/04/2024
Sample Received on	: 02/04/2024
Sample Analyzed & Completion	: 02/04/2024 to 09/04/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	578	490	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	82	77	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	10	11	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	6	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	2	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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Issue Date: 11/04/2024

TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 01/04/2024
Sample Received on	: 02/04/2024
Sample Analyzed & Completion	: 02/04/2024 to 09/04/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	558	480	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	36	34	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	14	15	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	50	51	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 01/04/2024
Sample Received on	: 02/04/2024
Sample Analyzed & Completion	: 02/04/2024 to 09/04/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	25	26	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	8.10	8.25	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	14	22	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	38	99	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1028	3665	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	100	124	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	189	815	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	140	168	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	12.6	23.1	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	632	685	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.6	1.0	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.4	0.9	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	<2	<2	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.5	0.7	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.06	0.08	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.3	0.6	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.1	0.2	IS 3025 (Part 57): 2021 (Curcumin Method)

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 01/04/2024
Sample Received on	: 02/04/2024
Sample Analyzed & Completion	: 02/04/2024 to 09/04/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	622	515	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	80	76	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	12	11	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	5	7	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	3	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT
MARINE WATER SAMPLE ANALYSIS REPORT
TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 01/04/2024
Sample Received on	: 02/04/2024
Sample Analyzed & Completion	: 02/04/2024 to 09/04/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	589	514	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	34	35	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	14	19	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	52	46	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/04-2023

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of Essar Steel Ltd.
Sample Collected on	: 01/04/2024
Sample Received on	: 02/04/2024
Sample Analyzed & Completion	: 02/04/2024 to 09/04/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	26	26	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	8.10	8.22	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	12	18	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	44	99	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1066	3852	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	100	138	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	198	852	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	162	189	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	14.0	24.6	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	659	706	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	1.0	1.8	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	1.2	2.0	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	2	3	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.5	0.9	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.08	0.09	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.5	0.9	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.1	0.3	IS 3025 (Part 57): 2021 (Curcumin Method)

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of Essar Steel Ltd.
Sample Collected on	: 01/04/2024
Sample Received on	: 02/04/2024
Sample Analyzed & Completion	: 02/04/2024 to 09/04/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	625	534	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	82	78	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	12	10	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	5	8	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	1	4	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of Essar Steel Ltd.
Sample Collected on	: 01/04/2024
Sample Received on	: 02/04/2024
Sample Analyzed & Completion	: 02/04/2024 to 09/04/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	572	490	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	40	32	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	19	18	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	41	50	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 01/05/2024
Sample Received on	: 02/05/2024
Sample Analyzed & Completion	: 02/05/2024 to 08/05/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	26	26	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	8.01	8.26	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	14	20	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	36	92	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1821	2238	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	88	130	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	389	465	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	146	180	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	6.0	15.2	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	572	690	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.4	0.7	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.2	0.6	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	<2	<2	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.3	0.6	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.06	0.08	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.2	0.3	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.1	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 01/05/2024
Sample Received on	: 02/05/2024
Sample Analyzed & Completion	: 02/05/2024 to 08/05/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	582	486	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	80	75	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	12	13	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	5	8	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	3	4	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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Issue Date: 11/05/2024

TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 01/05/2024
Sample Received on	: 02/05/2024
Sample Analyzed & Completion	: 02/05/2024 to 08/05/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	565	494	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	38	35	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	14	12	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	48	53	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 01/05/2024
Sample Received on	: 02/05/2024
Sample Analyzed & Completion	: 02/05/2024 to 08/05/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	27	27	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	8.14	8.20	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	14	20	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	40	102	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1016	3650	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	98	136	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	187	804	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	132	160	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	12.8	23.8	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	642	698	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.8	1.2	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.5	0.9	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	<2	<2	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.4	0.6	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.05	0.07	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.3	0.5	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.1	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

Note: (1) These results relate to the sample tested only.

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 01/05/2024
Sample Received on	: 02/05/2024
Sample Analyzed & Completion	: 02/05/2024 to 08/05/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	628	505	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	77	72	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	15	18	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	6	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	2	4	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 01/05/2024
Sample Received on	: 02/05/2024
Sample Analyzed & Completion	: 02/05/2024 to 08/05/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	598	490	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	38	32	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	12	20	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	50	48	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/05-2023

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of Essar Steel Ltd.
Sample Collected on	: 01/05/2024
Sample Received on	: 02/05/2024
Sample Analyzed & Completion	: 02/05/2024 to 08/05/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	27	27	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	8.16	8.20	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	14	22	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	40	94	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1058	3862	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	94	130	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	200	859	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	150	181	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	14.5	25.0	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	648	712	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	1.2	1.5	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	1.0	1.8	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	2	2	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.6	0.9	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.06	0.08	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.5	0.8	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.1	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of Essar Steel Ltd.
Sample Collected on	: 01/05/2024
Sample Received on	: 02/05/2024
Sample Analyzed & Completion	: 02/05/2024 to 08/05/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	610	525	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	80	76	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	12	12	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	6	7	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	2	5	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of Essar Steel Ltd.
Sample Collected on	: 01/05/2024
Sample Received on	: 02/05/2024
Sample Analyzed & Completion	: 02/05/2024 to 08/05/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	580	505	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	38	34	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	22	19	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	40	47	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 01/06/2024
Sample Received on	: 03/06/2024
Sample Analyzed & Completion	: 03/06/2024 to 10/06/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	28	28	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	7.97	8.19	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	12	17	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	39	85	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1830	2220	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	84	124	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	393	464	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	142	182	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	6.3	15.6	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	565	683	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.5	0.6	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.1	0.4	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	<2	<2	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.2	0.5	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.05	0.06	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.3	0.4	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.1	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 01/06/2024
Sample Received on	: 03/06/2024
Sample Analyzed & Completion	: 03/06/2024 to 10/06/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	574	482	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	78	72	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	13	15	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	7	9	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	2	4	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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Issue Date: 12/06/2024

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 01/06/2024
Sample Received on	: 03/06/2024
Sample Analyzed & Completion	: 03/06/2024 to 10/06/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	562	491	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	35	33	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	12	15	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	53	52	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 01/06/2024
Sample Received on	: 03/06/2024
Sample Analyzed & Completion	: 03/06/2024 to 10/06/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	28	28	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	8.08	8.23	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	13	18	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	36	97	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1030	3620	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	100	140	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	189	794	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	136	164	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	12.4	23.3	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	636	690	APHA 23 rd Edition, (Part 4000) Section 4500-SO4-2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.7	1.0	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.3	0.7	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	<2	<2	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.3	0.5	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.05	0.07	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.2	0.4	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.1	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 01/06/2024
Sample Received on	: 03/06/2024
Sample Analyzed & Completion	: 03/06/2024 to 10/06/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	620	510	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	79	74	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	13	16	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	5	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	3	4	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT
MARINE WATER SAMPLE ANALYSIS REPORT
TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 01/06/2024
Sample Received on	: 03/06/2024
Sample Analyzed & Completion	: 03/06/2024 to 10/06/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	585	482	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	35	30	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	11	19	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	54	51	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/06-2023

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of Essar Steel Ltd.
Sample Collected on	: 01/06/2024
Sample Received on	: 03/06/2024
Sample Analyzed & Completion	: 03/06/2024 to 10/06/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	27	28	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	8.13	8.23	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	12	19	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	42	91	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1070	3840	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	96	140	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	201	848	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	144	185	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	14.1	24.5	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	640	703	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	1.1	1.3	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	1.2	1.6	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	2	3	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.5	0.8	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.07	0.09	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.4	0.9	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.1	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of Essar Steel Ltd.
Sample Collected on	: 01/06/2024
Sample Received on	: 03/06/2024
Sample Analyzed & Completion	: 03/06/2024 to 10/06/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	622	538	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	83	80	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	10	11	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	5	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	2	3	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT
MARINE WATER SAMPLE ANALYSIS REPORT
TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of Essar Steel Ltd.
Sample Collected on	: 01/06/2024
Sample Received on	: 03/06/2024
Sample Analyzed & Completion	: 03/06/2024 to 10/06/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	565	492	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	41	36	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	17	15	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	42	49	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 18/07/2024
Sample Received on	: 19/07/2024
Sample Analyzed & Completion	: 19/07/2024 to 26/07/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	23	24	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	7.90	7.98	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	14	19	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	35	84	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1740	2340	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	84	104	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	372	505	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	160	173	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	7.4	14.3	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	550	662	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.7	0.6	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.50	0.42	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	3.2	2.9	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.5	0.4	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.05	0.06	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.5	0.4	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.13	0.16	IS 3025 (Part 57): 2021 (Curcumin Method)

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 18/07/2024
Sample Received on	: 19/07/2024
Sample Analyzed & Completion	: 19/07/2024 to 26/07/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	565	488	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	75	66	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	13	17	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	7	5	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	5	12	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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Issue Date: 01/08/2024

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 18/07/2024
Sample Received on	: 19/07/2024
Sample Analyzed & Completion	: 19/07/2024 to 26/07/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	532	490	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	31	28	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	19	27	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	50	45	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 18/07/2024
Sample Received on	: 19/07/2024
Sample Analyzed & Completion	: 19/07/2024 to 26/07/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	24	25	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	8.09	8.14	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	10	18	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	38	90	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1120	3620	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	92	120	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	216	807	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	160	154	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	13.4	21.7	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	632	651	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.7	0.6	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.4	0.49	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	2.5	2.3	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.45	0.52	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.07	0.06	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.5	0.4	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.12	0.14	IS 3025 (Part 57): 2021 (Curcumin Method)

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 18/07/2024
Sample Received on	: 19/07/2024
Sample Analyzed & Completion	: 19/07/2024 to 26/07/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	560	485	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	73	68	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	16	16	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	7	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	4	10	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 18/07/2024
Sample Received on	: 19/07/2024
Sample Analyzed & Completion	: 19/07/2024 to 26/07/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	515	480	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	32	30	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	17	22	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	51	48	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of ArcelorMittal Nippon Steel India Limited (AMNS)
Sample Collected on	: 18/07/2024
Sample Received on	: 19/07/2024
Sample Analyzed & Completion	: 19/07/2024 to 26/07/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	22	23	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	7.98	8.11	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	12	18	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	38	82	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1090	3720	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	104	128	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	202	826	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	157	164	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	15.1	21.7	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	642	660	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.7	0.6	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.4	0.35	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	2.3	2.1	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.3	0.4	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.07	0.06	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.5	0.4	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.12	0.16	IS 3025 (Part 57): 2021 (Curcumin Method)

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of ArcelorMittal Nippon Steel India Limited (AMNS)
Sample Collected on	: 18/07/2024
Sample Received on	: 19/07/2024
Sample Analyzed & Completion	: 19/07/2024 to 26/07/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	565	485	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	80	72	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	13	15	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	5	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	2	7	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of ArcelorMittal Nippon Steel India Limited (AMNS)
Sample Collected on	: 18/07/2024
Sample Received on	: 19/07/2024
Sample Analyzed & Completion	: 19/07/2024 to 26/07/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	525	505	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	30	27	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	19	26	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	51	47	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 16/08/2024
Sample Received on	: 17/08/2024
Sample Analyzed & Completion	: 17/08/2024 to 24/08/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	24	25	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	7.93	8.02	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	11	16	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	41	87	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1780	2200	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	72	96	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	389	476	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	164	170	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	7.6	16.2	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	563	652	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.6	0.7	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.42	0.45	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	2.8	3.2	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.4	0.4	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.06	0.07	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.4	0.4	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.12	0.10	IS 3025 (Part 57): 2021 (Curcumin Method)

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 16/08/2024
Sample Received on	: 17/08/2024
Sample Analyzed & Completion	: 17/08/2024 to 24/08/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	535	490	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	78	67	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	13	15	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	6	4	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	3	14	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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Issue Date: 02/09/2024

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 16/08/2024
Sample Received on	: 17/08/2024
Sample Analyzed & Completion	: 17/08/2024 to 24/08/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	505	450	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	32	29	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	17	22	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	51	49	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 16/08/2024
Sample Received on	: 17/08/2024
Sample Analyzed & Completion	: 17/08/2024 to 24/08/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	24	24	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	7.97	8.12	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	13	19	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	35	92	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1060	3720	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	104	128	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	194	826	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	150	163	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	13.2	25.3	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	632	670	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.5	0.7	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.3	0.4	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	3	2.8	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.42	0.48	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.07	0.09	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.4	0.5	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.2	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 16/08/2024
Sample Received on	: 17/08/2024
Sample Analyzed & Completion	: 17/08/2024 to 24/08/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	595	480	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	77	71	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	15	13	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	5	7	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	3	9	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 16/08/2024
Sample Received on	: 17/08/2024
Sample Analyzed & Completion	: 17/08/2024 to 24/08/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	510	470	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	29	31	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	17	21	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	54	48	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of ArcelorMittal Nippon Steel India Limited (AMNS)
Sample Collected on	: 16/08/2024
Sample Received on	: 17/08/2024
Sample Analyzed & Completion	: 17/08/2024 to 24/08/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	23	24	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	8.09	8.21	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	14	21	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	40	85	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1010	3800	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	96	128	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	187	846	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	147	162	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	13.5	25.2	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	622	653	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.6	0.8	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	1.1	1.0	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	2.6	2.5	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.3	0.4	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.05	0.06	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.4	0.5	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.2	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

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MARINE WATER SAMPLE ANALYSIS REPORT

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Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of ArcelorMittal Nippon Steel India Limited (AMNS)
Sample Collected on	: 16/08/2024
Sample Received on	: 17/08/2024
Sample Analyzed & Completion	: 17/08/2024 to 24/08/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	580	505	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	80	75	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	11	14	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	5	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	4	5	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of ArcelorMittal Nippon Steel India Limited (AMNS)
Sample Collected on	: 16/08/2024
Sample Received on	: 17/08/2024
Sample Analyzed & Completion	: 17/08/2024 to 24/08/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	505	470	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	32	25	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	15	26	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	53	49	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 16/09/2024
Sample Received on	: 18/09/2024
Sample Analyzed & Completion	: 18/09/2024 to 25/09/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	24	25	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	7.92	8.08	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	12	18	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	40	92	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1780	2260	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	76	112	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	386	481	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	154	175	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	7.5	17.8	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	563	652	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.5	0.6	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.4	0.5	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	<2	2.3	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.3	0.5	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.07	0.08	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.4	0.5	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.2	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 16/09/2024
Sample Received on	: 18/09/2024
Sample Analyzed & Completion	: 18/09/2024 to 25/09/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	580	510	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	83	72	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	10	15	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	4	7	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	3	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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Issue Date: 01/10/2024

TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Narmada Cement Jetty
Sample Collected on	: 16/09/2024
Sample Received on	: 18/09/2024
Sample Analyzed & Completion	: 18/09/2024 to 25/09/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	520	445	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	36	30	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	13	24	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	51	46	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 16/09/2024
Sample Received on	: 18/09/2024
Sample Analyzed & Completion	: 18/09/2024 to 25/09/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	24	25	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	7.99	8.11	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	11	18	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	45	102	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1050	3580	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	100	104	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	194	807	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	148	164	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	12.1	23.8	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	632	656	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.8	1.0	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	0.6	0.7	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	2	3	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.3	0.4	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.06	0.08	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.4	0.7	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.2	0.1	IS 3025 (Part 57): 2021 (Curcumin Method)

Note: (1) These results relate to the sample tested only.

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 16/09/2024
Sample Received on	: 18/09/2024
Sample Analyzed & Completion	: 18/09/2024 to 25/09/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	620	530	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	81	72	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	12	15	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	3	7	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	4	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of L&T Ltd.
Sample Collected on	: 16/09/2024
Sample Received on	: 18/09/2024
Sample Analyzed & Completion	: 18/09/2024 to 25/09/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	560	485	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	34	30	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	17	19	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	49	51	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water
Sampling Location	: Tapi River Near Jetty of ArcelorMittal Nippon Steel India Limited (AMNS)
Sample Collected on	: 16/09/2024
Sample Received on	: 18/09/2024
Sample Analyzed & Completion	: 18/09/2024 to 25/09/2024
Quantity/No. of Sample	: 2+1+1 L in plastic carboys (Each Location) /6 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			Low Tide	High Tide	
1	Temperature	°C	24	25	IS 3025 (Part 9): 1984 (Thermometer)
2	pH at 25 °C	pH Unit	8.11	8.23	IS 3025 (Part 11): 2022 (Electrometric Method)
3	Colour	pt.co.scale	12	22	APHA 23 rd Edition, (Part 2000) Section: 2120, C : 2017 (Spectrophotometric - Single Wavelength Method)
4	Total Suspended Solids	mg/L	43	91	IS 3025 (Part 17): 2022 (Gravimetric Method)
5	Total Hardness as CaCO ₃	mg/L	1010	3740	IS 3025 (Part 21): 2009 (EDTA Method)
6	Calcium as Ca	mg/L	100	136	IS 3025 (Part 40): 1991 (EDTA Titrimetric method)
7	Magnesium as Mg	mg/L	185	826	IS 3025 (Part 46): 1994 (Volumetric Method using EDTA)
8	Total Alkalinity as CaCO ₃	mg/L	151	174	IS 3025 (Part 23): 1986 (Color Indicator Titration Method)
9	Salinity	ppt	14.5	25.2	APHA 23 rd Edition- 2017, Section: 2520
10	Sulphate as SO ₄	mg/L	621	670	APHA 23 rd Edition, (Part 4000) Section 4500-SO ₄ -2, E : 2017 (Turbidimetric Method)
11	Phenolic compounds as (C ₆ H ₅ OH)	mg/L	<0.01	<0.01	IS 3025 (Part 43/Section 1) : 2022 (4 -Aminoantipyrine method without Chloroform Extraction)
12	Oil and Grease	mg/L	<0.1	<0.1	IS 3025 (Part 39): 2021 (Partition Gravimetric Method)
13	Total Nitrogen	mg/L	0.7	0.9	IS 3025 (Part 34) : 1988 (Titrimetric Method)
14	Phosphate as PO ₄	mg/L	1.1	0.9	APHA 23 rd Edition, (Part 4000) Section:4500-P, D: 2017
15	BOD (3 Days at 27°C)	mg/L	2.6	2.9	IS 3025 (Part 44) :1993
16	Iron as Fe	mg/L	0.4	0.5	IS 3025 (Part 53): 2003 (1,10 Phenanthroline Method)
17	Copper as Cu	mg/L	0.08	0.07	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
18	Chromium as Cr	mg/L	<0.03	<0.03	IS 3025 (Part 52): 2003 (Diphenylcarbazide Method)
19	Zinc as Zn	mg/L	0.5	0.6	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
20	Cadmium as Cd	mg/L	<0.05	<0.05	APHA 23 rd Edition, (Part-3000) Section: 3111, B: 2017 (AAS Method)
21	Boron as B	mg/L	0.1	0.2	IS 3025 (Part 57): 2021 (Curcumin Method)

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TEST REPORT

MARINE WATER SAMPLE ANALYSIS REPORT

TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Zooplankton Analysis
Sampling Location	: Tapi River Near Jetty of ArcelorMittal Nippon Steel India Limited (AMNS)
Sample Collected on	: 16/09/2024
Sample Received on	: 18/09/2024
Sample Analyzed & Completion	: 18/09/2024 to 25/09/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	590	510	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Protozoa	%	84	77	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Rotifera	%	10	13	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Nematoda	%	4	6	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
5	Copepoda	%	2	4	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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TEST REPORT
MARINE WATER SAMPLE ANALYSIS REPORT
TEST REPORT NO:QF/7.8/01 A/MARINE WATER/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Marine water for Phytoplankton Analysis
Sampling Location	: Tapi River Near Jetty of ArcelorMittal Nippon Steel India Limited (AMNS)
Sample Collected on	: 16/09/2024
Sample Received on	: 18/09/2024
Sample Analyzed & Completion	: 18/09/2024 to 25/09/2024
Quantity/No. of Sample	: 100ml concentrated water sample in plastic carboys (During High Tide & Low Tide)/2 Nos.
Protocol (Purpose)	: As Per work order
Packing/ Seal	: Packed
Sampling Method	: APHA 23 rd Edition 2017, Part-9000, Section: 9060 A
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Test Method
			High Tide	Low Tide	
1	Total Count	No/L	525	470	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
2	Cynophyceae	%	33	30	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
3	Chlorophyena	%	15	23	APHA, 23 rd Ed. - 2017, Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti
4	Bacillariophyceae	%	52	47	APHA, 23 rd Ed. - 2017 Part-9000 & Handbook of methods in Environmental studies by S.K.Maitti

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Annexure – 4. STP Sample Analysis Reports



Issue Date: 27/04/2024

TEST REPORT
SEWAGE SAMPLE ANALYSIS REPORT
TEST REPORT NO:QF/7.8/01 A/SEWAGE/L&T/Rev.0-00/04-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Sewage Sample
Mode Of Sampling	: Grab
Sample Collected On	: 17/04/2024
Sample Received on	: 18/04/2024
Sample Analyzed & Completion	: 18/04/2024 to 24/04/2024
Quantity/No. of Sample	: 2 Litre In plastic carboys (each location) /2 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Consent Limit	Test Method
			Inlet	Outlet		
1.	pH at 25 °C	pH-Unit	6.86	7.32	6.5-8.5	IS 3025 (Part 11): 2022
2.	Total Suspended Solids	mg/L	66	22	30	IS 3025 (Part 17): 2022
3.	BOD (3 days at 27 °C)	mg/L	78	15	20	IS 3025 (Part 44): 1993
4.	Free Residual Chlorine	mg/L	Nil	0.6	>0.5	IS 3025 (Part 26): 2021

Note: (1) These results relate to the sample tested only.

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Issue Date: 28/05/2024

TEST REPORT
SEWAGE SAMPLE ANALYSIS REPORT
TEST REPORT NO:QF/7.8/01 A/SEWAGE/L&T/Rev.0-00/05-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Sewage Sample
Mode Of Sampling	: Grab
Sample Collected On	: 18/05/2024
Sample Received on	: 20/05/2024
Sample Analyzed & Completion	: 20/05/2024 to 25/05/2024
Quantity/No. of Sample	: 2 Litre In plastic carboys (each location) /2 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Consent Limit	Test Method
			Inlet	Outlet		
1.	pH at 25 °C	pH-Unit	6.59	7.16	6.5-8.5	IS 3025 (Part 11): 2022
2.	Total Suspended Solids	mg/L	94	23	30	IS 3025 (Part 17): 2022
3.	BOD (3 days at 27 °C)	mg/L	98	18	20	IS 3025 (Part 44): 1993
4.	Free Residual Chlorine	mg/L	Nil	0.8	>0.5	IS 3025 (Part 26): 2021

Note: (1) These results relate to the sample tested only.

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Issue Date: 02/07/2024

TEST REPORT
SEWAGE SAMPLE ANALYSIS REPORT
TEST REPORT NO:QF/7.8/01 A/SEWAGE/L&T/Rev.0-00/06-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Sewage Sample
Mode Of Sampling	: Grab
Sample Collected On	: 22/06/2024
Sample Received on	: 24/06/2024
Sample Analyzed & Completion	: 24/06/2024 to 29/06/2024
Quantity/No. of Sample	: 2 Litre In plastic carboys (each location) /2 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Consent Limit	Test Method
			Inlet	Outlet		
1.	pH at 25 °C	pH-Unit	6.76	7.42	6.5-8.5	IS 3025 (Part 11): 2022
2.	Total Suspended Solids	mg/L	84	24	30	IS 3025 (Part 17): 2022
3.	BOD (3 days at 27 °C)	mg/L	90	16	20	IS 3025 (Part 44): 1993
4.	Free Residual Chlorine	mg/L	Nil	0.5	>0.5	IS 3025 (Part 26): 2021

Note: (1) These results relate to the sample tested only.

(2) The report shall not be reproduced except in full without written approval of the laboratory.

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Issue Date: 01/08/2024

TEST REPORT
SEWAGE SAMPLE ANALYSIS REPORT
TEST REPORT NO:QF/7.8/01 A/SEWAGE/L&T/Rev.0-00/07-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Sewage Sample
Mode Of Sampling	: Grab
Sample Collected On	: 18/07/2024
Sample Received on	: 19/07/2024
Sample Analyzed & Completion	: 19/07/2024 to 26/07/2024
Quantity/No. of Sample	: 2 Litre In plastic carboys (each location) /2 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Consent Limit	Test Method
			Inlet	Outlet		
1.	pH at 25 °C	pH-Unit	7.02	7.16	6.5-8.5	IS 3025 (Part 11): 2022
2.	Total Suspended Solids	mg/L	92	24	30	IS 3025 (Part 17): 2022
3.	BOD (3 days at 27 °C)	mg/L	72	14	20	IS 3025 (Part 44): 1993
4.	Free Residual Chlorine	mg/L	Nil	0.6	>0.5	IS 3025 (Part 26): 2021

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Issue Date: 02/09/2024

TEST REPORT
SEWAGE SAMPLE ANALYSIS REPORT
TEST REPORT NO:QF/7.8/01 A/SEWAGE/L&T/Rev.0-00/08-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Sewage Sample
Mode Of Sampling	: Grab
Sample Collected On	: 16/08/2024
Sample Received on	: 17/08/2024
Sample Analyzed & Completion	: 17/08/2024 to 24/08/2024
Quantity/No. of Sample	: 2 Litre In plastic carboys (each location) /2 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Consent Limit	Test Method
			Inlet	Outlet		
1.	pH at 25 °C	pH-Unit	7.08	7.30	6.5-8.5	IS 3025 (Part 11): 2022
2.	Total Suspended Solids	mg/L	78	22	30	IS 3025 (Part 17): 2022
3.	BOD (3 days at 27 °C)	mg/L	70	16	20	IS 3025 (Part 44): 1993
4.	Free Residual Chlorine	mg/L	Nil	0.5	>0.5	IS 3025 (Part 26): 2021

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Issue Date: 01/10/2024

TEST REPORT
SEWAGE SAMPLE ANALYSIS REPORT
TEST REPORT NO:QF/7.8/01 A/SEWAGE/L&T/Rev.0-00/09-2024

Name of the Industry	: M/s. Larsen & Toubro Limited Hazira Works, Dist. Surat
Sample Description	: Sewage Sample
Mode Of Sampling	: Grab
Sample Collected On	: 16/09/2024
Sample Received on	: 18/09/2024
Sample Analyzed & Completion	: 18/09/2024 to 25/09/2024
Quantity/No. of Sample	: 2 Litre In plastic carboys (each location) /2 Nos.
Packing/ Seal	: Packed
Protocol (Purpose)	: As per work order
Sampling Method	: APHA 23 rd Edition 2017, Part 1000 Section 1060 B
Sample Collected By	: ERM Team

Sr. No.	Parameters	Unit	Result		Consent Limit	Test Method
			Inlet	Outlet		
1.	pH at 25 °C	pH-Unit	7.00	7.42	6.5-8.5	IS 3025 (Part 11): 2022
2.	Total Suspended Solids	mg/L	96	28	30	IS 3025 (Part 17): 2022
3.	BOD (3 days at 27 °C)	mg/L	88	16	20	IS 3025 (Part 44): 1993
4.	Free Residual Chlorine	mg/L	Nil	0.5	>0.5	IS 3025 (Part 26): 2021

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