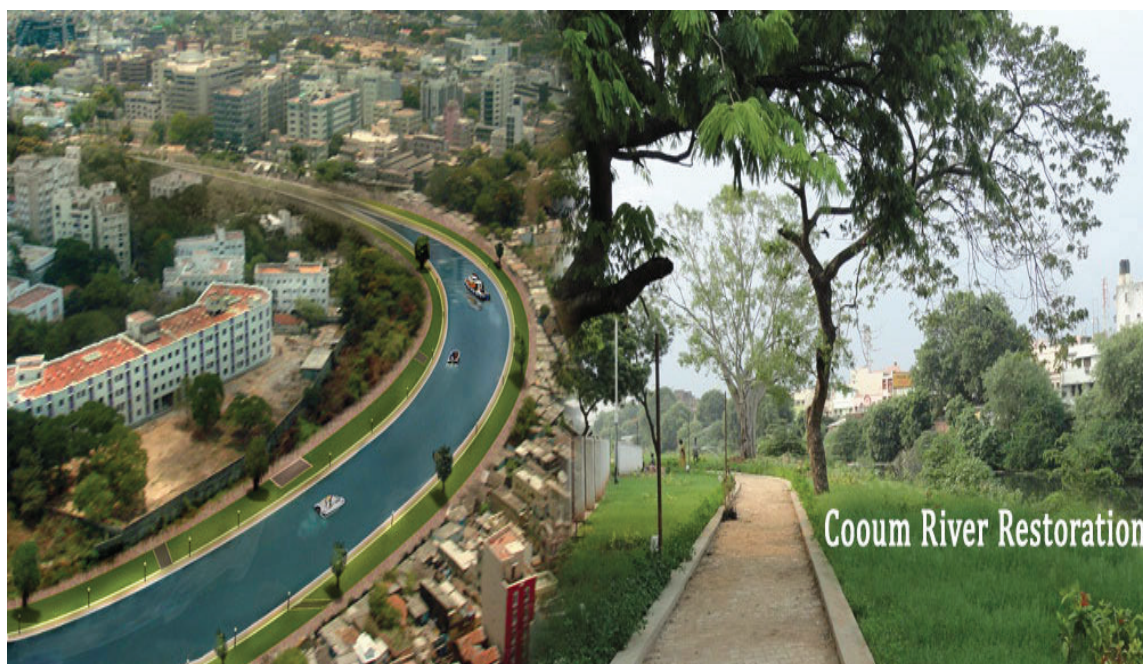


SIX MONTHLY MONITORING REPORT

**‘Integrated Cooum River Eco-restoration’ from Cooum River mouth to Chetpet
Railway Bridge, Chennai, Tamil Nadu**



By
Chennai Rivers Restoration Trust (CRRT)
Adyar Poonga, 6/103, Dr.D.G.S. Dinakaran Salai,
Raja Annamalaipuram, Chennai – 600 089

Submitted to;
Ministry of Environment, Forests and Climate Change (MoEF & CC)
Regional Office (Southern Eastern Zone)
No.34, Cathedral Garden Road,
Nungambakkam, Chennai – 600 034

June 2020

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SIX MONTHLY MONITORING REPORT

'Integrated Cooum River Eco-restoration' from Cooum River mouth to Chetpet Railway Bridge in Chennai, Tamil Nadu.

1.0 Project Background

The Government of Tamil Nadu has initiated the eco restoration project namely **“Integrated Cooum River Eco - restoration” from Cooum River mouth to Chetpet Railway Bridge** to improve the environmental quality and biodiversity in the region. The restoration proposed from Paruthipattu to the Cooum river mouth for a total distance of 32 km. under the eco-restoration project, CRRT proposes implementation of 60 sub-projects, of which 20 sub-projects including development of parks, maintenance of walkways, de-silting, laying of interceptors & modular Sewage Treatment Plants and flora & Mangrove plantation, thus fall in CRZ areas on either side of the tidal estuary.

The main objective of the proposed Integrated Cooum River Eco – restoration project is as follows:

1. To ensure effective abatement of pollution and protection of the river by adopting a sustainable approach, promoting inter-sectoral co-ordination through comprehensive integrated planning management.
2. To improve and maintain flood carrying capacity of the river
3. Riverfront development plan
4. The various works/activities that the line departments are involved under the project are details Public Works Department, Greater Chennai Corporation, Commissionerate of Municipal Administration, Directorate of Rural Development, Chennai Metropolitan Water Supply & Sewerage Board, Tamil Nadu Slum Clearance Board & Chennai Rivers Restoration Trust
5. The project proposals have a set of 69 activities to be performed in total over three phase. Phase – I (0 to 3 years) consist of 60 activities, Phase-II (4-8 years) of 7 activities and thereafter Phase-III comprises of maintenance activities after the restoration process is completed.
6. The total cost of the project is Rs. 105.00 crores and the time frame for completion of the project is 36 months from date of clearance.
7. Ecological restoration and its sustainability are the key objectives of the Integrated Cooum River Eco-Restoration project. Each aspect of the Cooum river restoration demonstrates a strong commitment to the environment.

The benefits of the proposed project are as follows:

- Protection, conservation, rehabilitation and enhancement of biodiversity of Cooum riverine system ecologically.
 - Improving and maintaining water quality that sustains wide varieties of aquatic biota and shelter native and migratory avifauna.
 - It will allow deep knowledge and understanding of the natural riverine ecosystem, and will create an environment to facilitate a relationship of mutual exchange between Cooum River Eco – Restoration and public, students, researchers, environmentalists and NGOs through the provision of environment education programs.
8. As per the detailed Cooum eco-restoration plan, tidal influence is observed in the river from the river mouth upto Chetpet Railway Bridge (9.6 Kms). About 20 subprojects fall under this tidal interaction zone. In this stretch, various pollution abatement measures are proposed such as Interceptors and diversion of sewage to improve the water quality, river channel improvement to enhance ecological flow of the river, development of parks and maintenance pathways. River bank vegetation and mangrove plantations are planned to enhance the diversity of flora and fauna in the Cooum riverine system.

2.0 CRZ Clearance

The project proposal attracts the provisions of Coastal Regulation Zone Notification 2011. Based on this, the proposal was appraised by the MoEF of New Delhi during June 2017 and accorded CRZ Clearance. Subsequently, we have obtained Consent to Establish from Tamil Nadu Pollution Control Board (TNPCB) and started the restoration activities.

3.0 Environmental Monitoring

As per the conditions stipulated in the CRZ Clearance issued by the MoEF, environmental monitoring is being carried out at the project site so as to monitor and thereby ensure that the pollutants do not exceed the prescribed limits. The parameters monitored are presented below.

Details of Environmental Monitoring

S. No.	Environmental Monitoring	Parameters Tested
1	Ambient Air Quality Monitoring	Particulate Matter-Less than 10µm, Particulate Matter-Less than 2.5µm, Sulphur dioxide, Oxides of Nitrogen, Carbon monoxide, Ozone, Lead, Ammonia, Benzene, Arsenic, Nickel and Benzo alpha Pyrene
2	Noise Level Monitoring	Ambient Noise level in dB(A)
3	Surface Water Sampling & Analysis	Colour, Odour, Temperature, p ^H , Electrical Conductivity, Dissolved Oxygen, Total Dissolved Solids, Salinity, Turbidity, Biochemical Oxygen Demand, Chemical Oxygen Demand, Total Suspended Solids, Ammonia, Nitrite, Nitrate, Carbonate, Bi-carbonates, Inorganic Phosphorus, Total Nitrogen, Calcium, Magnesium, Sodium, Potassium, Sulphate, Chloride, Chromium, Arsenic, Lead, Mercury, Nickel, Cadmium, Iron, Total Coliforms & Faecal coliforms
4	Ground Water Sampling & Analysis	Colour, Odour, Temperature, p ^H , Electrical Conductivity, Total Dissolved Solids, Salinity Nitrate, Nitrate, Inorganic, Magnesium, calcium, Sodium, Potassium, Carbonate, Bi-carbonates, Sulphate, Chloride, Phosphate, Chromium, Arsenic, Lead, Mercury, Nickel, Cadmium, Iron, Total Coliforms & Faecal coliforms
5	Soil Sampling and Analysis	p ^H @ 25°C, Salinity, Oil and Grease, Sodium Absorption Ratio, Sediment Texture, Total Kjeldal Nitrogen as N, Organic Carbon, Phosphorous as P, Sodium as Na, Potassium as K, Nickel as Ni, Zinc as Zn Chromium as Cr, Mercury as Hg, Arsenic as As, Lead as Pb, Iron as Fe and Cadmium as Cd.

3.1 Ambient Air Quality Monitoring

During restoration activities, pollutant emission are likely to occur from the site due to soil excavation, movement of vehicles, DG emission etc., the ambient air quality is being monitored for parameters as per NAAQS as per CPCB Notification dated 18th November 2009. Ambient air quality monitoring is being carried out at four locations within the project site. The test report of ambient air quality is enclosed herewith as Annexure- IX.

3.2 Ambient Noise Level Monitoring

During restoration activities, the ambient noise level is likely to increase due to excavation, and movement of vehicles. Ambient noise level is being monitored at six locations. The test reports of noise levels is enclosed herewith as Annexure-IX.

3.3 Surface Water Sampling and Analysis

The surface water is being tested for basic parameters including heavy metals to identify any impact due to restoration activities. The test reports of surface water samples are enclosed herewith as Annexure-IX.

3.4 Ground Water Sampling and Analysis

The ground water is being tested for basic parameters including heavy metals to identify any impact due to restoration activities. The test reports of ground water samples are enclosed herewith as Annexure-IX.

3.5 Soil Sampling and Analysis

Soil quality during restoration activities is likely to get affected due to excavation activities. Hence the soil samples are being collected and analyzed for different parameters including heavy metals. The test reports of soil samples are enclosed as Annexure-IX.

Annexure – I
Copy of CRZ Clearance

F.No.11-15/2016-IA-III

Government of India
Ministry of Environment, Forest and Climate Change
(IA.III Section)

Indira Paryavaran Bhawan,
Jor Bagh Road, New Delhi - 3

Dated: 28 June, 2017

To

The Member Secretary,
M/s Chennai Rivers Restoration Trust,
6/103, Adyar Poonga,
Dr. D.G.S. Dinakaran Salai, R.A. Puram,
Chennai - 28 (Tamil Nadu)

Sub: 'Integrated Cooum River Eco-restoration' from Cooum River mouth to Chetpet Railway Bridge in Chennai (Tamil Nadu) by M/s Chennai Rivers Restoration Trust - CRZ Clearance - reg.

Sir,

This has reference to your proposal forwarded by the Principal Secretary to the Government of Tamil Nadu, Environment & Forests (EC-3) Department, vide their letter No. 4957/EC.3/2016-1 dated 10th March, 2016 and subsequent letter dated 28th December, 2016, and your letters dated 27th May, 2016 and 23rd November, 2016 to this Ministry for grant of CRZ Clearance in term of the provisions of the Coastal Regulation Zone (CRZ) Notification, 2011 under the Environment (Protection), Act, 1986.

2. The proposal for **'Integrated Cooum River Eco-restoration'** from Cooum River mouth to Chetpet Railway Bridge in Chennai (Tamil Nadu) promoted by M/s Chennai Rivers Restoration Trust, was considered by the Expert Appraisal Committee (EAC) in the Ministry for Infrastructure Development, Coastal Regulation Zone, Building/ Construction and Miscellaneous projects, in its meetings held on 27-28 April, 2016, 28 - 29 June, 2016, 26th July, 2016 and 1st December, 2016.

3. The details of the project, as per the documents submitted by the project proponent, and also as informed during the above said EAC meetings, are reported to be as under:-

- (i) The State Government of Tamil Nadu has created the Chennai Rivers Restoration Trust (CRRT) under the Municipal Administration and Water Supply Department to take necessary action to improve ecological conditions of rivers and water bodies in Chennai.
- (ii) The interventions for Cooum River basin, under the proposed Integrated Cooum River Eco-restoration Project, are proposed from Paruthipattu to the Cooum river mouth for a total distance of 32 km.
- (iii) Under the eco-restoration project, CRRT proposes implementation of 60 sub-projects, of which 20 sub-projects including development of parks, maintenance of walkways, de-silting, laying of interceptors, & modular

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Sewage Treatment Plants and flora & Mangrove plantation, thus fall in CRZ areas on either side of the tidal estuary.

(iv) The main objective of the proposed Integrated Cooum River Eco-restoration Project is as follows:

- (a) To ensure effective abatement of pollution and protection of the river by adopting a sustainable approach, promoting inter-sectoral co-ordination through comprehensive integrated planning and management.
- (b) To improve and maintain flood carrying capacity of the river,
- (c) Riverfront development plan

(v) The various works/activities that the line departments are involved under the Project are detailed below:-

S.No	Department	Works
1.	Public Works Department	Desilting, Demarcation & Fixing boundary stones and Bio-metric survey
2.	Greater Chennai Corporation	Solid waste removal, Fencing, Boom deployment, Developing parks, cycle tracks and walkways
3.	Commissionerate of Municipal Administration	Solid Waste removal, Fencing and providing children parks.
4.	Directorate of Rural Development	Solid waste removal, Fencing and vegetation
5.	Chennai Metropolitan Water Supply & Sewerage Board	Laying interceptors, Installing modular sewage treatment plants & UGSS
6.	Tamil Nadu Slum Clearance Board	Resettlement & Rehabilitation plan
7.	Chennai Rivers Restoration Trust	Mangrove development, Flora Plantation, Community education programme and Monitoring of project implementation.

(vi) The project proposals have a set of 69 activities to be performed in total over three phases. Phase-I (0 to 3 years) consist of 60 activities, Phase-II (4-8 years) of 7 activities and thereafter Phase-III comprises of maintenance activities after the restoration process is completed.

(vii) The total cost of the project is Rs. 105.00 crores and the time frame for completion of the project is 36 months from date of clearance.

(viii) Ecological restoration and its sustainability are the key objectives of the Integrated Cooum River Eco-Restoration project. Each aspect of the Cooum river restoration demonstrates a strong commitment to the environment. The benefits of the proposed project are as follows:

- Protection, conservation, rehabilitation and enhancement of biodiversity of Cooum riverine system ecologically.
- Improving and maintaining water quality that sustains wide varieties of aquatic biota and shelter native and migratory avifauna.

3and

- It will allow deep knowledge and understanding of the natural riverine ecosystem, and will create an environment to facilitate a relationship of mutual exchange between Cooum River Eco-Restoration and public, students, researchers, environmentalists and NGOs through the provision of environment education programs.
- (ix) As per the detailed Cooum eco-restoration plan, tidal influence is observed in the river from the river mouth upto Chetpet Railway Bridge (9.6 Kms). About 20 subprojects fall under this tidal interaction zone. In this stretch, various pollution abatement measures are proposed such as Interceptors and diversion of sewage to improve the water quality, river channel improvement to enhance ecological flow of the river, development of parks and maintenance pathways. River bank vegetation and mangrove plantations are planned to enhance the diversity of flora and fauna in the Cooum riverine system.
- (x) The Tamil Nadu Coastal Zone Management Authority has recommended the project vide their letter No. 4957/EC.3/2016-1 dated 10th March, 2016.

4. The EAC, in its 164th meeting held on 1st December, 2016, has recommended the project for grant of CRZ Clearance. In acceptance of the recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords CRZ Clearance to the project **'Integrated Cooum River Eco-restoration'** from Cooum River mouth to Chetpet Railway Bridge in Chennai (Tamil Nadu) promoted by M/s Chennai Rivers Restoration Trust, under the provisions of the CRZ Notification, 2011 and amendments thereto and circulars issued thereon, and subject to the compliance of the specific and general conditions as under:-

A. Specific Conditions:

- (i) 'Consent to Establish' as may be applicable shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- (ii) All the recommendations/conditions stipulated by Tamil Nadu Coastal Zone Management Authority (TNCZMA) vide letter No. 4957/EC.3/2016-1 dated 10th March, 2016, shall be complied with.
- (iii) The construction in CRZ areas shall strictly be in accordance with the provisions of CRZ Notification, 2011.
- (iv) There shall be no dressing or alteration of the sand dunes, natural features including landscape changes for beautification, recreation and other such purpose.
- (v) Discharge parameters of BOD <30 mg/l, TSS <20 mg/l and COD <250 mg/l, in addition to standards for fecal coliform, NH₄ - N & N- total, shall be maintained.

sand

- (vi) The project proponent shall obtain necessary permission/clearances from the concerned authorities, as applicable.
- (vii) There shall no ground water drawl within CRZ area without approval of the competent Ground Water Authority.
- (viii) There shall be no disposal of solid/ liquid waste into coastal area. The Solid waste shall be collected, treated disposed in accordance with the Solid Waste Management Rules, 2016. Sewage Treatment facility shall be provided in accordance with the CRZ Notification, 2011. Treated sewage shall be reused for flushing of toilets and horticulture purposes.

B. GENERAL CONDITIONS:

- (i) Adequate provision for infrastructure facilities including water supply, fuel and sanitation must be ensured for construction workers during the construction phase of the project to avoid any damage to the environment.
- (ii) Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.
- (iii) Adequate precautions shall be taken during transportation of the construction material and pipes so that it does not affect the environment adversely.
- (iv) The project proponent will set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
- (v) A copy of the clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The Clearance letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
- (vi) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.
- (vii) The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.

5. The above 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, the EIA Notification, 2006 and the CRZ Notification, 2011.

6. Officials from the Regional Office of MoEF&CC, Chennai who would be monitoring the implementation of environmental safeguards shall be given

and

full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF&CC shall be forwarded to the APCCF, Regional Office of MoEF&CC, Chennai.

7. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

8. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

9. The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.

10. 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.

11. 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, Forest and Climate Change at <http://www.envfor.nic.in>. The advertisement shall be made within Seven 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 Chennai.

12. 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.

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

15. The proponent shall upload the status of compliance of the stipulated Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for

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the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

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 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 Clearance conditions and shall also be sent to the respective Regional Office of MoEF&CC by e-mail.

(Arvind Nautiyal)
Director

Copy to:

- 1) The Secretary, Environment & Forests Department, Govt. of Tamil Nadu, Saint Geroge Port, Chennai
- 2) The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-32
- 3) The Member Secretary, Tamil Nadu Pollution Control Board, No. 76, Mount Salai, Guindy, Chennai - 32
- 4) The Additional Principal CCF (C), Ministry of Environment, Forest and Climate Change, Regional Office, 1st Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai - 34
- 5) Guard File.
- 6) Monitoring File.

24/04/20
(Arvind Nautiyal)
Director

Annexure - II
Compliance Report on Conditions Stipulated in
CRZ Clearance

COMPLIANCE REPORT ON THE STIPULATED CONDITIONS
OF CRZ CLEARANCE

Annexure – II

CRZ Clearance for “Integrated Cooum River Eco-restoration” from Cooum River mouth to Chetpet Railway Bridge in Chennai, Tamil Nadu M/s. Chennai Rivers Restoration Trust (CRRT).

CRZ Clearance F.No. 11 -15/2016-IA.III dated 28.06.2017 (Copy enclosed as Annexure – I)

PART A – SPECIFIC CONDITIONS

S. No.	Specific Conditions	Status of Compliance
i	‘Consent to Establishment’ as may be applicable shall be obtained from State Pollution Control Board under Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	The Consent to Establishment will be obtained from Tamilnadu Pollution Control Board before starting the construction of modular STP and the copy of the same will be submitted to the Ministry before start of any construction work at the site.
ii	All the recommendations/conditions stipulated by Tamil Nadu Coastal Zone Management Authority (TNCZMA) vide letter no 4957/EC.3/2016-1 dated 10 th March, 2016, shall be complied with.	All the recommendations/conditions stipulated by Tamil Nadu Coastal Zone Management Authority (TNCZMA) vide letter no 4957/EC.3/2016-1 dated 10 th March, 2016, is complied with. The copy of the same is enclosed as Annexure – III for your reference.
iii	The construction in CRZ areas shall strictly be in accordance with the provisions of CRZ Notification, 2011.	The construction in CRZ areas is in accordance with the provisions of CRZ Notification, 2011.
iv	There shall be no dressing or alteration of the sand dunes, natural features including landscape changes for beautification, recreation and other such purpose.	There will not be any dressing or alteration of the sand dunes, natural features including landscape changes for beautification, recreation and other such purpose.
v	Discharge parameters of BOD <30 mg/l, TSS < 20 mg/l and COD <250 mg/l, in addition to standards for fecal coliform, NH4-N & N-total, shall be maintained.	Discharge parameters of BOD <30 mg/l, TSS < 20 mg/l and COD <250 mg/l, in addition to standards for fecal coliform, NH4-N & N-total will be maintained.
vi	The project proponent shall obtain necessary permission/clearances from the concerned authorities, as applicable.	Necessary permission/clearances from the concerned authorities will be obtained as applicable.
vii	There shall no ground water drawl within CRZ area without approval of the competent	There will not be ground water drawl within CRZ area without approval of the

**COMPLIANCE REPORT ON THE STIPULATED CONDITIONS
OF CRZ CLEARANCE**

S. No.	Specific Conditions	Status of Compliance
	Ground Water Authority.	competent Ground Water Authority.
viii	There shall be no disposal of solid / liquid waste into coastal area. The Solid waste shall be collected, treated disposed in accordance with Solid Waste Management Rules, 2016. Sewage Treatment facility shall be provided in accordance with the CRZ Notification, 2011. Treated sewage shall be reused for flushing of toilets and horticulture purposes.	There will not be disposal of solid / liquid waste into coastal area. The Solid waste will be collected, treated disposed in accordance with Solid Waste Management Rules, 2016. Sewage Treatment facility will be provided in accordance with the CRZ Notification, 2011. Treated sewage will be reused for horticulture purposes.

PART- B GENERAL CONDITIONS

S. No.	General Conditions	Status of Compliance
i	Adequate provision for infrastructure facilities including water supply, fuel and sanitation must be ensured for construction workers during the construction phase of the project to avoid any damage to the environment.	Adequate infrastructure facilities including water supply, fuel and sanitation facilities will be provided to construction workers during the construction phase of the project to avoid any damage to the environment.
ii	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	Appropriate measures will be taken for digging activities to avoid any likely degradation of water quality.
iii	Adequate precautions shall be taken during transportation of the construction material and pipes so that it does not affect the environment adversely.	Adequate precautions will be taken for transportation of the construction material and pipes to avoid adverse effect on the environment.
iv	The project proponent will set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	Separate environmental management cell has been formed for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
v	A copy of the clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The Clearance letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.	A copy of the clearance letter has been displayed on the website of the concerned State Pollution Control Board. The Clearance letter also been displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's

COMPLIANCE REPORT ON THE STIPULATED CONDITIONS
OF CRZ CLEARANCE

S. No.	General Conditions	Status of Compliance
		office for 30 days. The copy of the same is enclosed as Annexure – IV.
vi	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year – wise expenditure shall be reported to this Ministry and its concerned Regional Office.	The funds earmarked for environmental protection measures has been kept in separate account and will not be diverted for other purpose. Year – wise expenditure will be reported to this Ministry and its concerned Regional Office. The copy of the same is enclosed as Annexure – V
vii	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	The funding of the project was provided by the Government of Tamil Nadu. The total cost of the project is Rs.105 crores.
5	The above 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, the EIA Notification, 2006 and the CRZ Notification, 2011.	Agreed.
6	Officials from the Regional Office of MoEF&CC, Chennai who would be monitoring the implementation of environmental safeguards shall be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF&CC shall be forwarded to the APCCF, Regional Office of MoEF&CC, Chennai.	Full cooperation, facilities and documents/data will be extended for the Officials from the Regional Office of MoEF & CC, Chennai who would be monitoring the implementation of environmental safeguards during their inspection. A complete set of all the documents will be submitted to MoEF&CC and also forward to the APCCF, Regional Office of MoEF&CC, Chennai.
7	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.	Agreed.
8	The Ministry reserves the right to add	Agreed.

**COMPLIANCE REPORT ON THE STIPULATED CONDITIONS
OF CRZ CLEARANCE**

S. No.	General Conditions	Status of Compliance
	additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	
9	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.	Agreed.
10	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 competent authorities.	Agreed.
11	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 copies of clearance letters are available with the Tamil Nadu State Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forest at http://www.envfor.nic.in . The advertisement should be made within 10 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Chennai	Basic details of the project were advertised in two local newspapers within 10 days of the issuance of CRZ clearance and a copy of the same was forwarded to MoEF, Chennai. The copy of the same is enclosed as Annexure – V1.
12	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.	Agreed.

**COMPLIANCE REPORT ON THE STIPULATED CONDITIONS
OF CRZ CLEARANCE**

S. No.	General Conditions	Status of Compliance
13	Any appeal against this clearance shall lie with National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	No appeal was made.
14	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 suggestion / 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.	A Copy of the Clearance letter has been sent to our local body (Greater Chennai Corporation). We have uploaded the copy of the clearance in our website (www.chennairivers.gov.in)
15	The proponent shall upload the status of compliance of the stipulated Clearance conditions including results of monitoring 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. The criteria pollutant levels namely; SPM, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	We are submitting the status of compliance of the stipulated Clearance conditions, including results of monitored data regularly to the regional office of MoEF & CC and the Zonal office of the CPCB (copy of acknowledgment is enclosed as Annexure – VII) and TNPCB (copy of acknowledgment is enclosed as Annexure – VIII) and the status will be up loaded in the web site...
16	The environmental statement for each financial year ending 31 st 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 Clearance conditions and shall also be sent to the respective Regional Office of MoEF by e-mail.	We will submit the environmental statement for each financial year ending 31 st March in Form –V to TNPCB and we will also upload on to our website along with the status of compliance of Clearance conditions and also send it to the respective Regional Office of MoEF by e-mail. The copy of the same is enclosed as Annexure – IX.

Annexure – III
Proof of the MoM of the Tamil Nadu State Coastal
Zone Management Authority



Environment & Forests (EC-3)
Department,
Secretariat, Chennai - 600 009

Letter No. 4957/EC.3/2016-1, Dated 10.03.2016

From
Thiru Hans Raj Verma, I.A.S.,
Principal Secretary to Government

To
The Chairman,
National Coastal Zone Management Authority,
Government of India,
Ministry of Environment and Forests and Climate Change,
Agni Wing, 5th Floor, Indira Paryavaran Bhavan,
Jor Bagh Road, Aliganj,
New Delhi - 110 003. (w.e.)

Sir,

Sub: Integrated Cooum River Eco- restoration project in
Chennai proposed by CRRT, Chennai - Clearance
under Coastal Regulation Zone Notification 2011
requested - Reg.

Ref: From the Director of Environment Letter No.
P1/172/2016, dated 3.03.2016.

I am to enclose a copy of the proposal received from the Member Secretary Tamil Nadu State Coastal Zone Management Authority/Director of Environment together with its enclosures and to state that the Member Secretary, Tamil Nadu State Coastal Zone Management Authority/ Director of Environment has sent the proposal for clearance under Coastal Regulation Zone Notification, 2011, for the project of Integrated Cooum River Eco- restoration project in Chennai proposed by CRRT, Chennai and he has furnished the following details in this regard:-

- The Chennai River Restoration Trust (CRRT), Adyar Poonga has proposed several activities under the project "Integrated Cooum River Eco Restoration Project (ICRERP)" to restore and protect the degraded Cooum River and provide a clean environment to the urban community. Originally under the project the following major activities are proposed along the Cooum River

p10

I. River front development -

- a. Development of park at right bank upstream of Central Buckingham Canal ie. Napier Bridge to Penyar Bridge, walkway with 2.50 m width, lawn, Children play ground, view point terraces,
 - b. Developing public space at right bank from C in C Road Bridge to College Road Bridge – lawn, children play ground, view point and terraces, food courts
 - c. Developing public space on the right bank from Munroe Bridge to Chetpet Railway Bridge, Walk way, cycle track
- o II. Maintenance walk way at right bank from river mouth to Napier bridge.
 - o III. Mangrove Development along the river bank
 - o IV. Sewage and Sanitation (interceptors, Modular STPs, manholes)
 - o V. Flood Management – De-silting the Cooum River from river mouth to upstream side of Napier Bridge, deepening of river beds.
 - o VI. De-silting is proposed. – the volume of accumulated silt is 76,425 cum, 61,388 cum & 3,70,364 cum in three places. Totally 5,08,177 cum. 60% will be used for stabilizing the river beds (bundling) and developing greenery (landscape changes). The desilting is permissible activity. However bunding and landscape changes are prohibited activities. The CRRT indicated that the balance dredging silt will be disposed to Chennai Corporation dump yards equivalent to 23,715 trucks.
- The project area between the Cooum river mouth and Chetpet Bridge is falling in CRZ in CRZ-I (Inter tidal zone), CRZ-II and CRZ-IV (water area). The project cost is Rs.105 crores. As per the proposal the public space is for the recreational purpose – Any reclamation for entertainment activity and any landscape changes for beautification are prohibited activities vide Para 3 (ix) and 3 (xiii) of CRZ Notification 2011.
 - The District Coastal Zone Management Authority for CMDA areas has recommended the project to the TNSCZMA subject to the following conditions:
 - a. The desilting of River Cooum shall be undertaken only once.
 - b. The silt generated shall be scientifically disposed in suitable area outside CRZ area.
 - c. The Nature Reserve proposed to be established in the CRZ area shall not be a public park and be maintained as a Nature Reserve. Park should not be utilized for entertainment / recreation purpose.

-3-

- d. The greeneries proposed in the CRZ area shall be undertaken in consultation with the Forest Department.
 - e. The modular STPs proposed in the CRZ area shall be temporary nature to treat the raw sewage let into River Cooum until permanent measures are taken by CMWSSB to provide sewerage network for treatment & disposal.
 - f. The treated sewage shall meet the disposal standards as prescribed by the TNPCB and to be utilised for greenery development or for other beneficial use.
 - g. The consent to establish of the TNPCB shall be obtained prior to the establishment of the STPs.
 - h. Food Courts should not be established. There should not be any cycle track, Children play ground, view point and terraces in CRZ.
 - i. Walk way should be paved for only maintenance purpose.
- Maintenance or clearing of waterways, channels and ports, based on EIA studies is permissible activities as per para 3 (iv) of CRZ Notification 2011. However the above activities require Clearance from MoEF& CC vide para 4 (ii)(d) as the proposal involves constructions several interception mains to convey the sewage from outfalls to STPs for treatment and for discharge into the river.
 - The subject was placed before the 88th meeting of the State Coastal Zone Management Authority held on 15.02.2016 and the Authority resolved to request the following details from the CRRT.
 - a. Flood mitigation Plan including flood modelling for the river to be prepared and implemented on the event of any heavy rain fall to mitigate the adverse impacts. And the plan so prepared should be validated to the recent floods.
 - b. Specific details on the project components, which are proposed to be executed by the PWD.
 - c. List of Mangroves Associates and native species with specific focus on riparian vegetation to be planted should be furnished.
 - Accordingly the CRRT furnished the above details in their letter dated 24.02.2016.
 - Therefore the State Coastal Zone Management Authority resolved in the Circulation agenda dated 03.03.2016 to recommend this proposal to Ministry of Environment and Forests, Government of India for their consideration.

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-4-

2. The Member Secretary, Tamil Nadu State Coastal Zone Management Authority/ Director of Environment has sent a copy of proposal along with reports, HTL Map and minutes of the 88th meeting of TNSCZMA held on 15.02.2016 and Circulation agenda & notes dated 03.03.2016 and requested that the proposal may be recommended to Ministry of Environment and Forests and Climate Change, Government of India.

3. In line with the recommendation of the Tamil Nadu State Coastal Zone Management Authority, this Government recommend the proposal of Member Secretary, Tamil Nadu State Coastal Zone Management Authority/ Director of Environment for clearance under Coastal Regulation Zone Notification, 2011 for the "Integrated Cooum River Eco- restoration project" in Chennai proposed by CRRT, Chennai to the Chairman, National Coastal Zone Management Authority, New Delhi, subject to the conditions stipulated at para-1 above.

Yours faithfully,

For Principal Secretary to Government

10/3/16

Copy to:

The Member Secretary,
Tamil Nadu State Coastal Zone Management Authority /
Director of Environment, Chennai-15
The Member Secretary,
CRRT, 6/103, Adyar Poonga,
Dr.D.G.S.Dinakaran Salai,
R.A.Puram, Chennai-600 028.
(with a request to furnish 20 copies of
the proposal of GoI, MoEF&CC, New Delhi)
SF/SC.

Annexure – IV

**Proof of the Clearance letter submitted to local
body & TNPCB (Corporation of Chennai,
District Industries Centre & Collector office).**

CRRT

CHENNAI RIVERS RESTORATION TRUST

(Wholly owned by Government of Tamil Nadu)

Kakarla Usha, I.A.S.,
Member Secretary

CRRT Coom CRZ/2017

Dated 04.07.2017

To

The Commissioner

Greater Chennai Corporation

Ripon Building, Chennai - 600 003

Sir,

Sub: CRRT - Integrated Coom River Eco Restoration Project from River Mouth
to Chetpet Railway Bridge - CRZ Clearance - Regarding.

Ref: CRZ Clearance, F.No.11-15/2016-IA-III (IA - III Section) dated: 28.06.2017

With the reference cited, the Ministry of Environment and Forests, Government of India, under the CRZ vide letter, F.No.11-15/2016-IA-III (IA - III Section) dated: 28.06.2017 have accorded CRZ Clearance for the Integrated Coom River Eco Restoration Project by Chennai Rivers Restoration Trust. In the Clearance Order, it is mentioned that, a copy of the clearance letter shall be sent by the proponent to the concerned Municipal Corporation. In this regard, a copy of the Clearance Order is sent for your information.

Thanking you,

Yours faithfully,

Kakarla Usha
Member Secretary

//Forwarded by Order//

28/07/17
Administrative & Accounts Officer
Chennai Rivers Restoration Trust

CRRT

CHENNAI RIVERS RESTORATION TRUST

(Wholly owned by Government of Tamil Nadu)

Kakarla Usha, F.A.S.,

Member Secretary

CRRT Coom CRZ - 2017

Dated 04.07.2017

To

Regional Joint Director

Department of Industries and Commerce,

City Industrial Estate,

Chennai - 600 032

Sub:

Sub: CRRT - Integrated Coom River Eco Restoration Project from River Mouth
to Chetpet Railway Bridge - CRZ Clearance - Regarding.

Ref: CRZ Clearance, F.No.11-15/2016-IA-III (IA -III Section) dated: 28.06.2017

With the reference cited, the Ministry of Environment and Forests, Government of India under the CRZ vide letter, F.No.11-15/2016-IA-III (IA -III Section) dated: 28.06.2017 have accorded CRZ Clearance for the Integrated Coom River Eco Restoration Project by Chennai Rivers Restoration Trust. In the Clearance Order, it is mentioned that, a copy of the clearance letter shall be displayed on the website of the District Industries center for 30 days. In this regard, I request you to display the Clearance Order in your website for 30 days.

Thanking you,

Encl: A/a

Kakarla Usha
Member Secretary

//Forwarded by Order//

gk/gk 4/7/17
Administrative & Accounts Officer
Chennai Rivers Restoration Trust

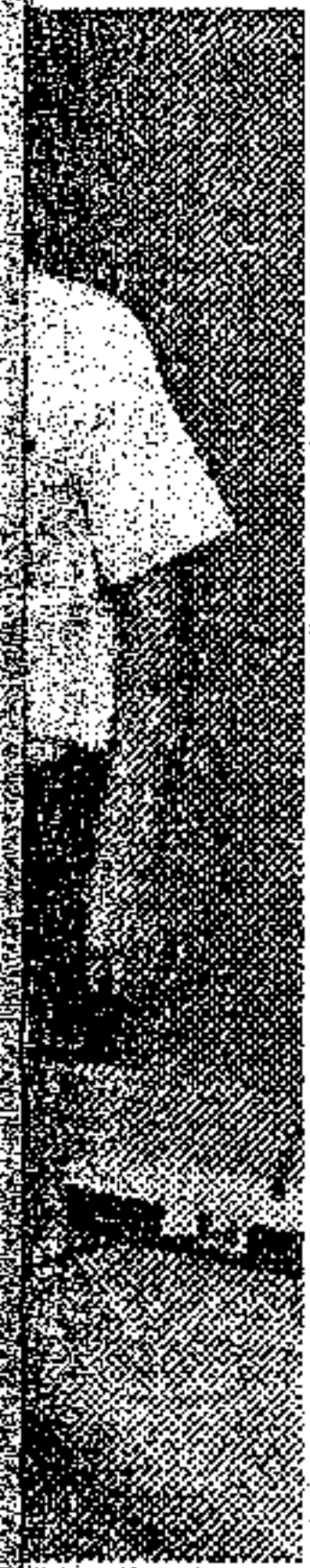
Annexure – V
CRRT- Year-wise Expenditure cost

Capital Cost for Eco-Restoration Projects

S.No	Particulars	Project Cost (in Crores)	
		Capital	Expenditure spent (October -2020 to March -2020)
1	Development of Maintenance walkway and parks	32.17	Nil
2	Sewage Interceptor and modular STPs	27.21	0.77
3	Desiltation of accumulated silt	40.87	0.48
4	Mangrove & Flora Plantation	4.75	Nil
5	Environmental Monitoring (Ambient Air Quality, Ambient Noise quality & Water Quality)	0.028	0.028

Annexure - VI
Proof for advertisement of CRZ Clearance
obtained from MoEF & CC in two newspapers
(Tamil & English)

ன் அறுவை சிகிச்சை



ர்மிளா, கியோர் சிகிச்சை ர். தனி

யார் மருத்துவமனையில் இந்த அறுவை சிகிச்சைக்கு ரூ. 80 ஆயிரம் வரை செலவாகும் நிலையில், முதல்வரின் விரிவான மருத்துவக் காப்பீட்டுத் திட்டத்தில் இலவசமாக செய்யப்பட்டுள்ளது.

இந்த அரசு மருத்துவமனையில் முதல் முறையாக செய்யப்பட்ட அறுவை சிகிச்சைக்குப் பிறகு சந்தோஷினி, கீர்த்திகா இருவரும் வீட்டிற்கு அனுப்பி வைக்கப்பட்டனர். நவீன் தொடர்ந்து சிகிச்சை பெற்று வருகிறார்.

இதுபோன்ற மாறுகண் குறைபாடு உடையவர்கள் பிரதி வாரம் செவ்வாய்க்கிழமை சிறப்பு மருத்துவர்கள் மூலம் பரிசோதனை செய்து கொள்ளலாம் என கண் பிரிவு துறைத் தலைவர் பிரமிளா தெரிவித்தார்.

அறுவை சிகிச்சைக்குப் பிறகு குணமடைந்த குழந்தைகள், சிறப்பாக சிகிச்சை அளித்த மருத்துவர்களை, முதல்வர் உஷா சதாசிவம், துணை முதல்வர் எம்.பாஸ்கரன் ஆகியோர் பாராட்டுத் தெரிவித்தனர்.

சிறு வயது திருமணம் தடுத்து நிறுத்தம்: மணமகன் கைது

ஆரணி, ஜூலை 6: ஆரணி அருகே வடக்குமேடு கிராமத்தில் 14 வயது சிறுமிக்கு நடைபெற இருந்த திருமணம் தடுத்து நிறுத்தப்பட்டது. மேலும், மணமகனை போலீஸார் கைது செய்தனர்.

ஆரணியை அடுத்த வடக்குமேடு கிராமத்தில் 14 வயது சிறுமிக்கு புதன்கிழமை திருமணம் நடைபெற ஏற்பாடு செய்யப்பட்டுள்ளதாக மாவட்ட ஆட்சியருக்கு தகவல் கிடைத்தது.

அதன்பேரில், ஆட்சியரின் உத்தரவின்பேரில், செய்யாறு கோட்டாட்சியர் (பொ) பானு, மாவட்ட சமூக நல அலுவலர் கிறிஸ்டினா, ஆரணி வட்டாட்சியர் சுப்பிரமணியன் மற்றும் வருவாய்த் துறையினர், வடக்குமேடு கிராமத்துக்கு செவ்வாய்க்கிழமை இரவு சென்றனர். அப்போது, அங்கு மணமக்கள் வரவேற்பு நிகழ்ச்சி நடைபெற்றது தெரியவந்தது. இதையடுத்து, அதிகாரிகள் விசாரணை நடத்தி, திருமண வரவேற்பு நிகழ்ச்சியை தடுத்து நிறுத்தினர்.

பின்னர், மணமக்களை ஆரணி கிராமிய காவல் நிலையத்தில் ஒப்படைத்தனர். இதையடுத்து, மணமகன் எழிலரசை போலீஸார் கைது செய்தனர். மணமகளான 14 வயது சிறுமியை திருவண்ணாமலையில் உள்ள காப்பகத்தில் ஒப்படைத்தனர்.

டை இன்டஸ்ட்ரியல் காம்பளக்ஸ் கிளை ஸ்ட்ரியல் காம்பளக்ஸ், இராணிப்பேட்டை, -632403, தொ.பே. 04172-244181

ன அறிவிப்பு

002, விதி 6 (2) மற்றும் 8 (6), கடனீட்டு மத்தல் மற்றும் கடனீட்டு சொத்து மீதான கீழ் உத்தேச விற்பனை அறிவிப்பு.

டஸ்ட்ரியல் எஸ்டேட், திருவாலம் முதல் மற்றும் அஞ்சல், காட்பாடி வட்டம், வேலூர்

ராமன், M/S HITECH FAB -ன் பங்குதாரர், நகர், திருவாலம், வேலூர் மாவட்டம் -

ர், M/S HITECH FAB -ன் பங்குதாரர், 36/51, த்தம், வேலூர் மாவட்டம்

IC கிளையிலுள்ள SEC OD கணக்கு (902319240)

ரிதரன் மற்றும் திரு. K. யசோதர் இந்தியன் காம்பளக்ஸ் கிளையிலிருந்து பின்வரும் நுக்களை ("இனி சொத்து" எனப்படும்) னார். M/s Hitech Fab - ன் பங்குதாரர்கள் ர், நிலுவைத் தொகையினை செலுத்தாத ரக்கமாக்குதல் மற்றும் சீரமைத்தல் மற்றும் ிட்டு சொத்து மீதான உரிமை அமலாக்கச் யு 13(2)- ன் கீழ் 27.02.2017 தேதியிட்ட லவர் M/s Hitech Fab - ன் பங்குதாரர்கள் ஆகியோருக்கு அனுப்பி வங்கிக்கு செலுத்த ப்படி ரூ.22,84,155/- (ரூபாய் இருபத்திரண்டு த்தைந்து மட்டும்) மற்றும் முதலுள்ள அதன் ன் உட்பட ஆகியவற்றை செலுத்துமாறு கள் திரு. J. முரளிதரன் மற்றும் திரு. K. ர்கு பிறகும் நிலுவைத் தொகையினை

J. முரளிதரன் மற்றும் திரு. K. யசோதர் ரியதால் அதிகாரபூர்வ அலுவலர் சட்ட ணையில் கொடுக்கப்பட்டுள்ள சொத்தினை றுக் கொண்டார்.

ய)-ன் கீழ் சுவாதீனம் எடுத்துக் கொண்ட ியுண்டு. இதன் தொடர்ச்சியாக சுவாதீனம் லவர் விற்பனை செய்ய உத்தேசித்துள்ளார்.

ர e-ஏல் முறையில் விற்பனை செய்ய

NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI - 620015.

Notice Inviting Tender for supply of 9 KHz to 7.5 GHz Spectrum analyzer
Tender No. NITT/F.No.: SA002/FIST/ECE
Dated : 05.07.2017

Sealed Tenders are invited from reputed manufacturers or their authorized dealers for the supply of 9 KHz to 7.5 GHz Spectrum analyzer. The last date for submission of tender is 25.07.2017 at 03.30 p.m. For further details, please visit our web site www.nitt.edu.

DIRECTOR

தமிழ்நாடு அரசு
சென்னை நதிகள் சீரமைப்பு அறக்கட்டளை
டாக்டர். டி.ஜி.எஸ். தினகரன் சாலை,
ராஜா அண்ணாமலைபுரம், சென்னை - 600 028

நாள்: 06.07.2017

சென்னை நதிகள் சீரமைப்பு அறக்கட்டளையின் சார்பாக ஒருங்கிணைந்த கூலம் நதி சுற்றுச்சூழல் சீரமைப்புத் திட்டப் பணிகளை மேற்கொள்வதற்காக இந்திய அரசின் சுற்றுச்சூழல், வனம் மற்றும் பருவநிலை மாற்றம் அமைச்சகத்தின், கடல்சார் ஒழுங்குமுறை ஆணையம் 28.06.2017 அன்று சுற்றுச்சூழல் அனுமதி வழங்கியுள்ளது. இதனை தமிழ்நாடு மாசுக் கட்டுப்பாட்டு வாரியம், எண் 76, அண்ணா சாலை, கிண்டி, சென்னை - 600 032 மற்றும் மத்திய சுற்றுச்சூழல், வனம் மற்றும் பருவநிலை மாற்றம் அமைச்சகத்தின் இணையதளத்திலும் www.envfor.nic.in காணலாம்.

உறுப்பினர் செயலர்

சென்னை நதிகள் சீரமைப்பு அறக்கட்டளை

செ.ம.தொ.இ/679/வரைகலை/2017



TAMIL NADU HOUSING BOARD
PROJECT CIRCLE

SHORT TENDER NOTICE NO:SE/PC/04/2017-18

Dated: 06-07-2017

Wax Sealed tenders with pre-qualification system duly super scribed on the covers with name of work, reference No, due date and name of tenderer are invited for the following works so as to reach the office of the Superintending Engineer, Project Circle, Tamil Nadu Housing Board, No. 485, M.T.B Building, Anna Salai, Nandanam, Chennai-600 035 upto 3.00 P.M (as per office clock) on the due dates mentioned below. The tenders will be opened by the undersigned at his office at 3.15 P.M on the same day in the presence of the tenderer or their agent who choose to be present.

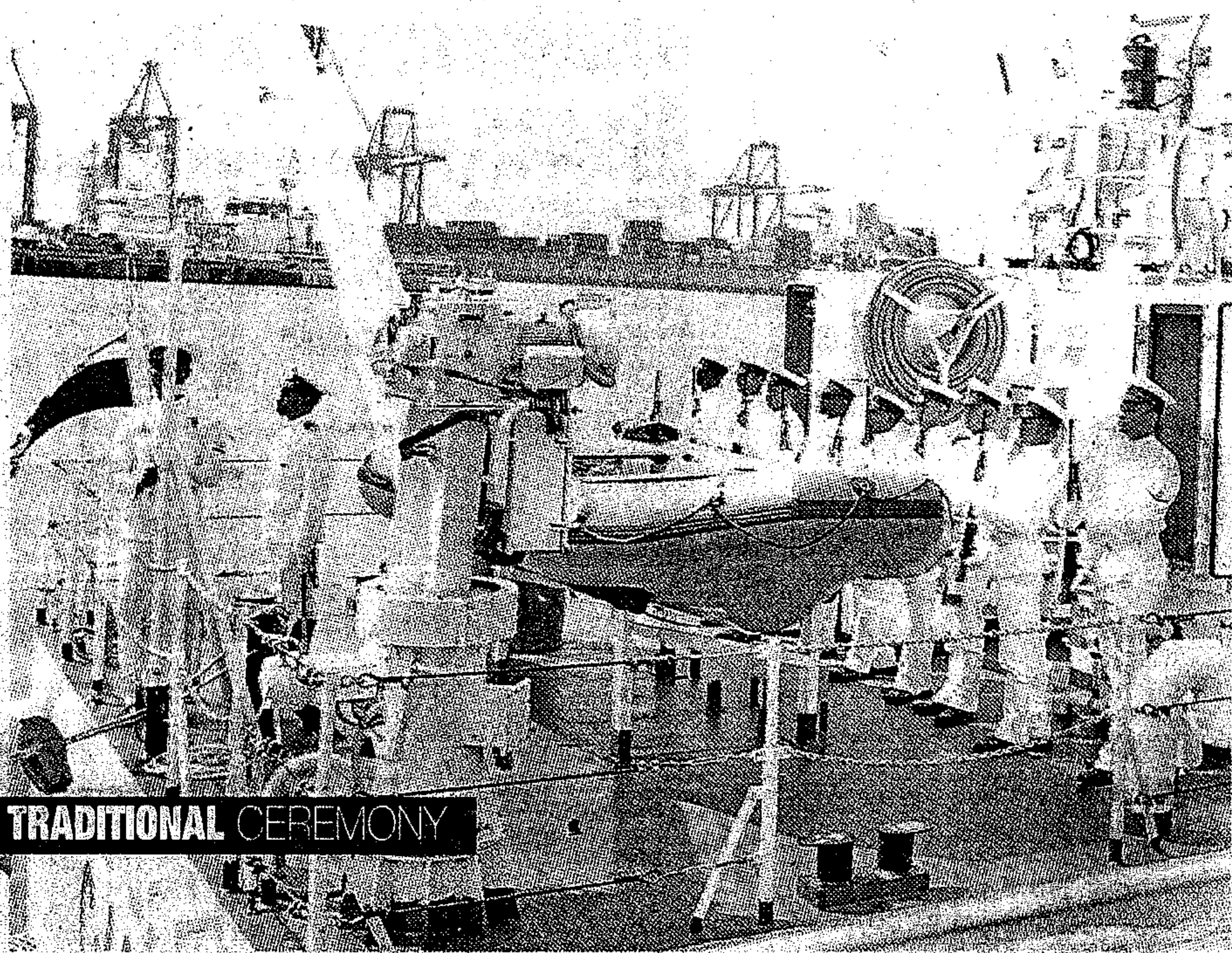
Sl. No.	Description of work	Approximate value (Rs. in lakhs)	EMD Amount of Rs.	Cost of Tender Schedule in Rs. (Non-refundable)	Period during which the tender schedule available for sale	Last date of receipt and opening of tender
1	2	3	4	5	6	7
1	Providing comprehensive turnkey job of FTTH infrastructure facilities concept and execution through Fiber GPON - Technology to AIS, HIG, LIG - 1016 MSB flats at Nerkundram Scheme, Chennai-92	86.00	53,000/-	17,700/-	07.07.2017 to 13.07.2017	14.07.2017

- The tender schedule can also be downloaded from the website www.tenders.tn.gov.in at free of cost.
- Further particulars and tender documents can be had from the Officers of the Superintending Engineer, Project Circle,

Claims tion

RED BY 35%

● The bench struck down the fisheries department estimated amount (of ₹ 203.22 crore) and directed officials to accept forms from all victims.



TRADITIONAL CEREMONY

Commissioning ceremony of Indian Coast Guard Boats (IBs) C-431 and C-432 held in a traditional way at Port Trust on Thursday.

—DC

Camp to help acid victims get jobs

DC CORRESPONDENT
CHENNAI, JULY 6

Farhana, a 27-year-old acid victim and a postgraduate in English literature, had knocked on all doors to get a job, so that she could manage her medical expenditure.

In order to facilitate many victims like Farhana, Atijevan Foundation, which is working towards the rehabilitation of acid and burns survivors, is organising a med-

ical and employment camp at SIMS hospital on July 15. It brings together the victims (acid and burns), medical experts and corporates on a single platform.

The camp aims to change the deep-rooted stereotypes which overlook skills and give prominence to a person's looks. Participants would be sensitized on Micro vascular surgery, micro facial surgery and medical tattooing.

mate change (MoEFCC), told the bench that they had inspected all 20 vulnerable localities affected by the oil spill. "Samples were collected and a report will be submitted within three weeks," the counsel for MoEFCC said.

However, despite the court's previous order, no expert is appointed to enquire the oil spill case, which is still under the purview of Minjur inspector.

The next hearing is posted to September 12.



Business news:
Catch the Bull by its horns

DECCAN
Chronicle



GOVERNMENT OF TAMIL NADU
CHENNAI RIVERS RESTORATION TRUST

Dr.D.G.S.Dinakaran Salai, R.A.Puram, Chennai -28

Date: 06.07.2017

The Ministry of Environment, Forest and Climate Change, Forests, Government of India, vide letter, F.No.11-15/2016-IA-III (IA -III Section) dated: 28.06.2017 have accorded CRZ Clearance for the Integrated Cooum River Eco Restoration Project by Chennai Rivers Restoration Trust. A copy of the Clearance letter is available with Tamil Nadu Pollution Control Board, No.76, Anna Salai, Guindy, Chennai -32 and also on the website of the Ministry of Environment, Forest and Climate Change at <http://www.envfor.nic.in>

Member Secretary

Chennai Rivers Restoration Trust

0100/670/DISPLAV/0017

Annexure - VII
Acknowledgment copy - Six monthly monitoring
reports submitted to Zonal Office, TNPCB,
Chennai

3rd July 2020

To
The Zonal Officer,
Tamil Nadu Pollution Control Board,
(Chennai Zone)
76, Mount Salai, Guindy
Chennai – 600 032

Sir,

Sub: Submission of Six Monthly Monitoring Report – Regd.

Ref: CRZ Clearance. F. No. 11-15 / 2016-IA.III / dt. 28.06.2017.

We wish to inform you that we have obtained CRZ Clearance for Proposed 'Integrated Cooum River Eco-restoration' from Cooum River mouth to Chetpet Railway Bridge in Chennai, Tamil Nadu. As per the conditions stipulated in the CRZ Clearance, we are submitting herewith the Six Monthly Monitoring Report (Hard copy & Soft copy in CD) for the period of October 2019 to March 2020.

The receipt of this letter may kindly be acknowledged.

Thanking you.

Malikar
Project Officer
CRRT

Authorized Signatory

Name : Dr.V.Kalaiarasan
Designation : Project Officer
Mobile No : 9444855751
Landline No : 044 - 24614523
Email ID : po.crrt@gmail.com

Enclosure: Six Monthly Monitoring Report (Hard Copy & Soft Copy in CD).



Annexure - VIII

**Acknowledgment copy - Six monthly monitoring
reports submitted to Zonal Office CPCB,
Bangalore**

3rd July, 2020

To,
The Zonal Officer,
Central Pollution Control Board,
1st & 2nd Floors, Nisarga Bhavan,
A-Block, Thimmaiah Main Road,
7th D Cross, Shivanagar, Opp.
Pushpanjali Theatre, Bengaluru -560 010

ET306923719IN ITR:6984306923719
SPP BNPL HUB ST. THOMAS MOUNT <600016>
Counter No:6,09/07/2020,11:32
To:THE ZONAL OFFICER,CENTRAL PCB
PIN:560010, Rajajinagar H.O
From:CHENNAI RIV,DR DGS DINAKARAN
Wt:590gms
Amt:106.20(Cash)Tax:16.20
<Track on www.indiapost.gov.in>



Sir,

Sub: Submission of Six Monthly Monitoring Report – Regd.

Ref: CRZ Clearance. F. No. 11-15 / 2016-IA.III / dt. 28.06.2017.

We wish to inform you that we have obtained CRZ Clearance for Proposed Integrated Cooum River Eco-restoration from Cooum River mouth to Chetpet Railway Bridge in Chennai, Tamil Nadu. As per the conditions stipulated in the CRZ Clearance, we are submitting herewith the Six Monthly Monitoring Report (Hard Copy & Soft Copy in CD) for the period of October 2019 to March 2020.

The receipt of this letter may kindly be acknowledged.

Thanking you.

Maliniar
Project Officer
CRRT

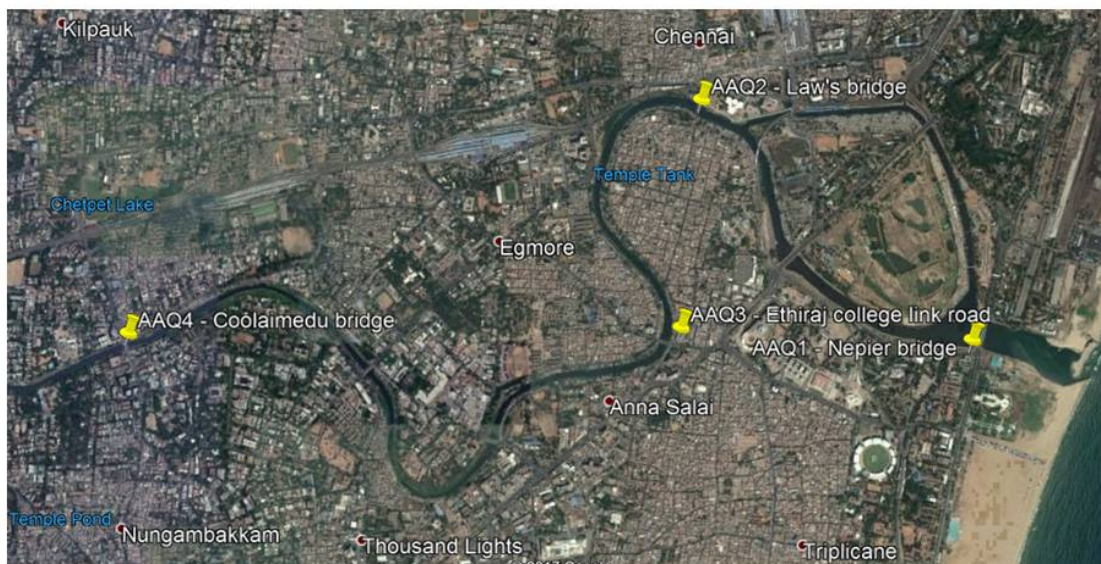
Authorized Signatory

Name : Dr.V.Kalaiarasan
Designation : Project Officer
Mobile No : 9444855751
Landline No : 044 - 24614523
Email ID : po.crirt@gmail.com

Enclosure: Six Monthly Monitoring Report (Hard Copy & Soft Copy in CD).

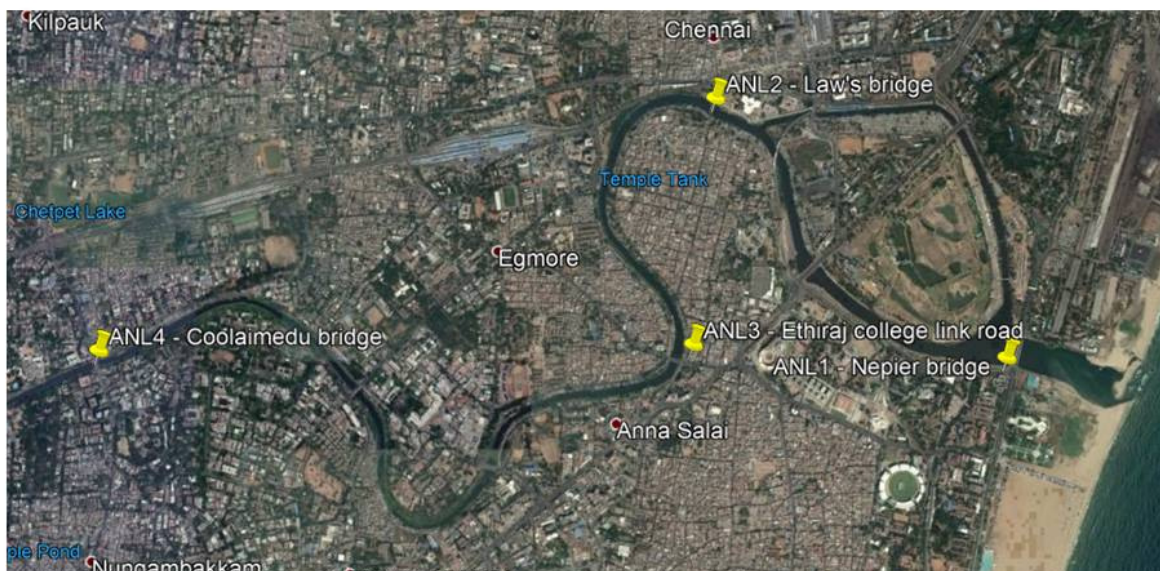
Annexure – IX
Environmental Monitoring Location Map

Air Monitoring Location Map



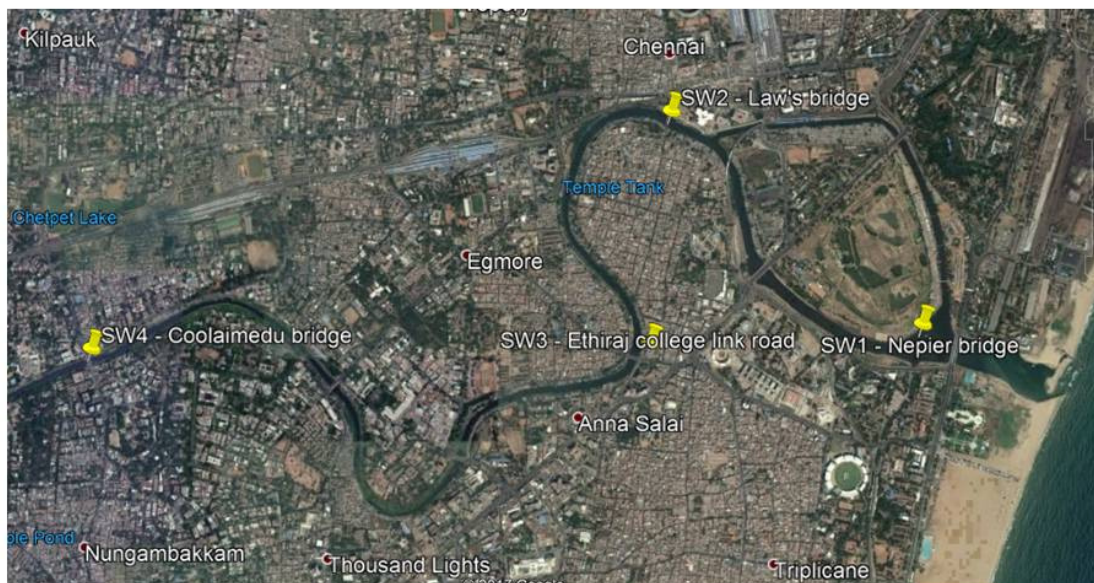
SL.No	Location Code	Name of the Location
1	A1	Near Nepier bridge
2	A2	Near Law's bridge
3	A3	Near Ethiraj college link road
4	A4	Near Coolaimedu bridge

Noise Monitoring Location Map



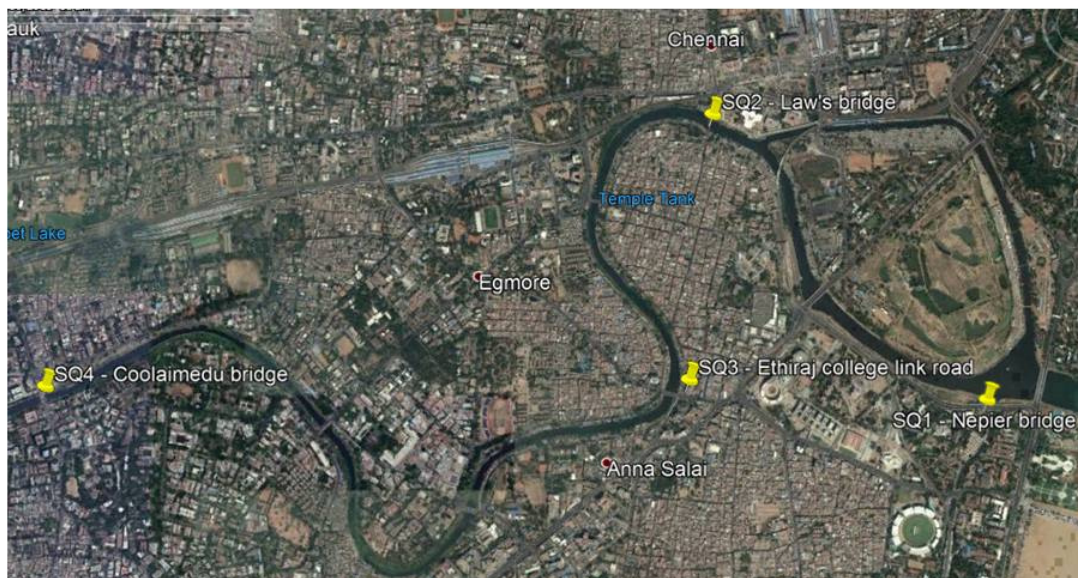
SL.No	Location Code	Name of the Location
1	N1	Near Nepier bridge
2	N2	Near Law's bridge
3	N3	Near Ethiraj college link road
4	N4	Near Coolaimedu bridge

Surface & Ground Water Sampling Location Map



SL. No	Location Code	Source of Water	Name of the Location
1	SW1	Surface Water	Near Nepier bridge
2	SW2	Surface Water	Near Law's bridge
3	SW3	Surface Water	Near Ethiraj college link road
4	SW4	Surface Water	Near Coolaimedu bridge
5	GW1	Ground Water	Near Law's bridge
6	GW2	Ground Water	Near Ethiraj college link road
7	GW3	Ground Water	Near Coolaimedu bridge

Soil Sampling Location Map



SL.No	Location Code	Name of the Location
1	S1	Near Nepier bridge
2	S2	Near Law's bridge
3	S3	Near Ethiraj college link road
4	S4	Near Coolaimedu bridge

Annexure – X
Environmental Monitoring Reports - Test
Reports (October 2019 – March 2020)



ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/02/2244
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 12.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1763
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ambient Air
Sampling Locations : Nappier Bridge
Category of Area/Zone : (AAQ-1)
Commercial Area
Sampling Plan/Procedure : ESIPL/SOP/C-AA/01
Ambient Temperature during the sampling (Average) : 29.5°C
Relative Humidity during the sampling (Average) : 70%
Time and Hours of sampling : 24 Hrs

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
01	Particulate Matter (Size Less than 10 µm) in µg/m ³	IS :5182 Part 23-RA2012	56	100
02	Particulate Matter (Size Less than 2.5 µm) in µg/m ³	ESIPL/SOP/C-AA/03	21	60
03	Sulphur dioxide in µg/m ³	IS :5182 Part 2-RA2012	6.4	80
04	Oxides of Nitrogen in µg/m ³	IS :5182 Part 6-RA2012	17.1	80
05	Ozone in µg/m ³	IS:5182 Part 9-RA2014	BDL(DL: 5.0)	180
06	Carbon Monoxide in mg/m ³	NIOSH -6604	BDL(DL:1.14)	2.0
07	Ammonia in µg/m ³	ESIPL/SOP/C-AA/07	11.3	400

BDL - Below Detection Limit; DL - Detection Limit

^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.

Verified by

R. Sivakumar
(R.Sivakumar)

.....End of page 1.....

For Eco Services India Pvt. Ltd.,



Note: § This report relates only to the particular sample submitted for test. § Any correction not attested shall invalidate this report. § This report shall not be reproduced in full or part without our written approval. § The test samples will not be retained for more than 7 days from the date of issue of test report unless otherwise requested by the customer.

Registered Office & Laboratory:

No.1/134, Dhanakotiraja Street, Sundar Nagar, Ekkaduthangal, Guindy, Chennai – 600 032, Tamil Nadu, India
Phone: (044) 30683067/43102232 E-mail: info@ecoservices.in, www.ecoservices.in



ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No.: ESIPL/EMS/2020/02/2244

Page 2 of 2

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
08	Lead in $\mu\text{g}/\text{m}^3$	IS :5182 Part 22-2004	BDL(DL:0.001 $\mu\text{g}/\text{m}^3$)	1.0
09	Benzene in $\mu\text{g}/\text{m}^3$	IS:5182 Part 11-2006	BDL(DL:1.0 $\mu\text{g}/\text{m}^3$)	5.0
10	Benzo alpha Pyrene in ng/m^3	IS:5182 Part 12-2004; RA-2009	BDL(DL:0.8 ng/m^3)	1.0
11	Arsenic in ng/m^3	USEPA IO 3.2	BDL(DL:1.0 ng/m^3)	6.0
12	Nickel in ng/m^3	USEPA IO 3.2	BDL(DL:3.0 ng/m^3)	20.0

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. ^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.
3. The above parameters from serial No.08 to 12 not covered in our NABL Scope and subcontracted to other Laboratory.
4. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Phone: (044) 30683067/43102232 E-mail: info@ecoservices.in, www.ecoservices.in



ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/02/2245
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 12.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1764
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ambient Air
Sampling Locations : Law's Bridge- (AAQ-2)
Category of Area/Zone : Commercial Area
Sampling Plan/Procedure : ESIPL/SOP/C-AA/01
Ambient Temperature during the sampling (Average) : 29.5°C
Relative Humidity during the sampling (Average) : 70%
Time and Hours of sampling : 24 Hrs

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
01	Particulate Matter (Size Less than 10 µm) in µg/m ³	IS :5182 Part 23-RA2012	64	100
02	Particulate Matter (Size Less than 2.5 µm) in µg/m ³	ESIPL/SOP/C-AA/03	25	60
03	Sulphur dioxide in µg/m ³	IS :5182 Part 2-RA2012	7.7	80
04	Oxides of Nitrogen in µg/m ³	IS :5182 Part 6-RA2012	16.9	80
05	Ozone in µg/m ³	IS:5182 Part 9-RA2014	BDL(DL: 5.0)	180
06	Carbon Monoxide in mg/m ³	NIOSH -6604	BDL(DL:1.14)	2.0
07	Ammonia in µg/m ³	ESIPL/SOP/C-AA/07	9.4	400

BDL - Below Detection Limit; DL - Detection Limit

^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.

Verified by

R. Sivakumar
(R.Sivakumar)

.....End of page 1.....

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No.: ESIPL/EMS/2020/02/2245

Page 2 of 2

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
08	Lead in $\mu\text{g}/\text{m}^3$	IS :5182 Part 22-2004	BDL(DL:0.001 $\mu\text{g}/\text{m}^3$)	1.0
09	Benzene in $\mu\text{g}/\text{m}^3$	IS:5182 Part 11-2006	BDL(DL:1.0 $\mu\text{g}/\text{m}^3$)	5.0
10	Benzo alpha Pyrene in ng/m^3	IS:5182 Part 12-2004; RA-2009	BDL(DL:0.8 ng/m^3)	1.0
11	Arsenic in ng/m^3	USEPA IO 3.2	BDL(DL:1.0 ng/m^3)	6.0
12	Nickel in ng/m^3	USEPA IO 3.2	BDL(DL:3.0 ng/m^3)	20.0

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. ^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.
3. The above parameters from serial No.08 to 12 not covered in our NABL Scope and subcontracted to other Laboratory.
4. Please refer our NABL Certificate Nos. TC-5664 and Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



Note: § This report relates only to the particular sample submitted for test. § Any correction not attested shall invalidate this report. § This report shall not be reproduced in full or part without our written approval. § The test samples will not be retained for more than 7 days from the date of issue of test report unless otherwise requested by the customer.

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Phone: (044) 30683067/43102232 E-mail: info@ecoservices.in, www.ecoservices.in



ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No.	: ESIPL/EMS/2020/02/2246	Date of Sampling	: 12.02.2020
Customer Name	: M/s. CHENNAI RIVERS RESTORATION TRUST	Date of Registration	: 13.02.2020
	Dr.D.G.S. Dinakaran Salai	Sample Code	: E-1765
	Raja Annamalaipuram	Test Commenced on	: 13.02.2020
	Chennai – 600 028.	Test Completed on	: 19.02.2020
Project Address	: “Integrated Cooum River Restoration Project”	Report Issuing Date	: 19.02.2020
Sample Description	:	Ambient Air	
Sampling Locations	:	Ethiraj college link road (AAQ-3)	
Category of Area/Zone	:	Commercial Area	
Sampling Plan/Procedure	:	ESIPL/SOP/C-AA/01	
Ambient Temperature during the sampling (Average)	:	39.5°C	
Relative Humidity during the sampling (Average)	:	70%	
Time and Hours of sampling	:	24 Hrs	

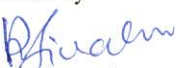
S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
01	Particulate Matter (Size Less than 10 µm) in µg/m ³	IS :5182 Part 23-RA2012	65	100
02	Particulate Matter (Size Less than 2.5 µm) in µg/m ³	ESIPL/SOP/C-AA/03	28	60
03	Sulphur dioxide in µg/m ³	IS :5182 Part 2-RA2012	6.4	80
04	Oxides of Nitrogen in µg/m ³	IS :5182 Part 6-RA2012	20	80
05	Ozone in µg/m ³	IS:5182 Part 9-RA2014	BDL(DL: 5.0)	180
06	Carbon Monoxide in mg/m ³	NIOSH -6604	BDL(DL:1.14)	2.0
07	Ammonia in µg/m ³	ESIPL/SOP/C-AA/07	11.3	400

BDL - Below Detection Limit; DL - Detection Limit

^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.

.....End of page 1.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No.: ESIPL/EMS/2020/02/2246

Page 2 of 2


S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
08	Lead in $\mu\text{g}/\text{m}^3$	IS :5182 Part 22-2004	BDL(DL:0.001 $\mu\text{g}/\text{m}^3$)	1.0
09	Benzene in $\mu\text{g}/\text{m}^3$	IS:5182 Part 11-2006	BDL(DL:1.0 $\mu\text{g}/\text{m}^3$)	5.0
10	Benzo alpha Pyrene in ng/m^3	IS:5182 Part 12-2004; RA-2009	BDL(DL:0.8 ng/m^3)	1.0
11	Arsenic in ng/m^3	USEPA IO 3.2	BDL(DL:1.0 ng/m^3)	6.0
12	Nickel in ng/m^3	USEPA IO 3.2	BDL(DL:3.0 ng/m^3)	20.0

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. ^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.
3. The above parameters from serial No.08 to 12 not covered in our NABL Scope and subcontracted to other Laboratory.
4. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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No.1/134, Dhanakottiraja Street, Sundar Nagar, Ekkaduthangal, Guindy, Chennai – 600 032, Tamil Nadu, India
Phone: (044) 30683067/43102232 E-mail: info@ecoservices.in, www.ecoservices.in



ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/02/2247
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 12.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1766
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ambient Air
Sampling Locations : Choolaimedu Bridge (AAQ-4)
Category of Area/Zone : Commercial Area
Sampling Plan/Procedure : ESIPL/SOP/C-AA/01
Ambient Temperature during the sampling (Average) : 29.5°C
Relative Humidity during the sampling (Average) : 70%
Time and Hours of sampling : 24 Hrs

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^S
01	Particulate Matter (Size Less than 10 µm) in µg/m ³	IS :5182 Part 23-RA2012	51	100
02	Particulate Matter (Size Less than 2.5 µm) in µg/m ³	ESIPL/SOP/C-AA/03	18	60
03	Sulphur dioxide in µg/m ³	IS :5182 Part 2-RA2012	5.9	80
04	Oxides of Nitrogen in µg/m ³	IS :5182 Part 6-RA2012	16.2	80
05	Ozone in µg/m ³	IS:5182 Part 9-RA2014	BDL(DL: 5.0)	180
06	Carbon Monoxide in mg/m ³	NIOSH -6604	BDL(DL:1.14)	2.0
07	Ammonia in µg/m ³	ESIPL/SOP/C-AA/07	BDL(DL: 5.0)	400

BDL - Below Detection Limit; DL - Detection Limit

^S Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.

.....End of page 1.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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(LABORATORY DIVISION)

Test Report

Report No.: ESIPL/EMS/2020/02/2247

Page 2 of 2

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
08	Lead in $\mu\text{g}/\text{m}^3$	IS :5182 Part 22-2004	BDL(DL:0.001 $\mu\text{g}/\text{m}^3$)	1.0
09	Benzene in $\mu\text{g}/\text{m}^3$	IS:5182 Part 11-2006	BDL(DL:1.0 $\mu\text{g}/\text{m}^3$)	5.0
10	Benzo alpha Pyrene in ng/m^3	IS:5182 Part 12-2004; RA-2009	BDL(DL:0.8 ng/m^3)	1.0
11	Arsenic in ng/m^3	USEPA IO 3.2	BDL(DL:1.0 ng/m^3)	6.0
12	Nickel in ng/m^3	USEPA IO 3.2	BDL(DL:3.0 ng/m^3)	20.0

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. ^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.
3. The above parameters from serial No.08 to 12 not covered in our NABL Scope and subcontracted to other Laboratory.
4. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

..... End of Report.....

Verified by


(R. Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

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Test Report

Report No. : ESIPL/EMS/2020/02/2248
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 12.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1767
Test Commenced on : 13.02.2020
Test Completed on : 16.02.2020
Report Issuing Date : 16.02.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ambient Noise in dB(A) Leq
Sampling Plan/Procedure : ESIPL/SOP/C- NL/01
Sampling Period : 24 Hrs
Sample Location : Neppiar's Bridge
Category of Area/Zone : Commercial Area

Time of monitoring	(NQ – 1) Result
6.00 - 7.00	59.1
7.00 - 8.00	58.4
8.00 - 9.00	59.3
9.00 - 10.00	60.5
10.00 - 11.00	62.4
11.00 - 12.00	63.8
12.00 - 13.00	62.9
13.00 - 14.00	60.7
14.00 - 15.00	64.3
15.00 - 16.00	62.9
16.00 - 17.00	64.1
17.00 - 18.00	62.7
18.00 - 19.00	60.5
19.00 - 21.00	63.1
21.00 - 21.00	62.5
21.00 - 22.00	53.9
22.00 - 23.00	54.6
23.00 - 24.00	53.1
0.00 - 1.00	55.2
1.00 - 2.00	54.3
2.00 - 3.00	55.4
3.00 - 4.00	53.9
4.00 - 5.00	54.6
5.00 - 6.00	55.2
Average Noise of Day Equivalent	62.1
Average Noise of Night Equivalent	54.4

The Noise Pollution (Regulation and Control) Rules 2000-Ambient Air Quality Standards in Respect of Noise. Leq is an energy mean of the noise level at Commercial area over a specified period of day time = 65 dB(A) Leq and Night time = 55 dB(A) Leq .

.....End of Report.....

Verified by


(M. Beer Mohamed)

For Eco Services India Pvt. Ltd.,



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Test Report

Report No. : ESIPL/EMS/2020/02/2249
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 12.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1768
Test Commenced on : 13.02.2020
Test Completed on : 16.02.2020
Report Issuing Date : 16.02.2020
Project Address : “Integrated Cooum River Restoration Project”


Sample Description : Ambient Noise in dB(A) Leq
Sampling Plan/Procedure : ESIPL/SOP/C- NL/01
Sampling Period : 24 Hrs
Sample Location : Law's Bridge
Category of Area/Zone : Commercial Area

Time of monitoring	(NQ – 2) Result
6.00 - 7.00	59.3
7.00 - 8.00	58.6
8.00 - 9.00	59.1
9.00 - 10.00	60.3
10.00 - 11.00	62.4
11.00 - 12.00	63.8
12.00 - 13.00	64.1
13.00 - 14.00	62.9
14.00 - 15.00	61.7
15.00 - 16.00	60.8
16.00 - 17.00	59.4
17.00 - 18.00	63.1
18.00 - 19.00	64.6
19.00 - 21.00	63.2
21.00 - 21.00	58.7
21.00 - 22.00	59.5
22.00 - 23.00	55.9
23.00 - 24.00	54.9
0.00 - 1.00	52.6
1.00 - 2.00	54.6
2.00 - 3.00	52.6
3.00 - 4.00	51.9
4.00 - 5.00	52.8
5.00 - 6.00	53.8
Average Noise of Day Equivalent	61.8
Average Noise of Night Equivalent	53.6

The Noise Pollution (Regulation and Control) Rules 2000-Ambient Air Quality Standards in Respect of Noise. Leq is an energy mean of the noise level at Commercial area over a specified period of day time = 65 dB(A) Leq and Night time = 55 dB(A) Leq .

.....End of Report.....

Verified by


(M. Beer Mohamed)

For Eco Services India Pvt. Ltd.,



Authorized Signatory

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Test Report

Report No. : ESIPL/EMS/2020/02/2250
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 12.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1769
Test Commenced on : 13.02.2020
Test Completed on : 16.02.2020
Report Issuing Date : 16.02.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ambient Noise in dB(A) Leq
Sampling Plan/Procedure : ESIPL/SOP/C- NL/01
Sampling Period : 24 Hrs
Sample Location : Ethiraj college link road
Category of Area/Zone : Commercial Area

Time of monitoring	(NQ – 3) Result
6.00 - 7.00	59.6
7.00 - 8.00	58.7
8.00 - 9.00	59.2
9.00 - 10.00	58.9
10.00 - 11.00	60.7
11.00 - 12.00	64.1
12.00 - 13.00	62.4
13.00 - 14.00	63.2
14.00 - 15.00	61.8
15.00 - 16.00	62.2
16.00 - 17.00	60.4
17.00 - 18.00	62.1
18.00 - 19.00	63.5
19.00 - 20.00	62.9
20.00 - 21.00	60.6
21.00 - 22.00	55.9
22.00 - 23.00	53.9
23.00 - 24.00	55.5
0.00 - 1.00	54.5
1.00 - 2.00	54.4
2.00 - 3.00	52.9
3.00 - 4.00	53.9
4.00 - 5.00	54.4
5.00 - 6.00	55.6
Average Noise of Day Equivalent	61.6
Average Noise of Night Equivalent	54.5

The Noise Pollution (Regulation and Control) Rules 2000-Ambient Air Quality Standards in Respect of Noise.Leq is an energy mean of the noise level at Commercial area over a specified period of day time = 65 dB(A) Leq and Night time = 55 dB(A) Leq

.....End of Report.....

Verified by

(M.Beer Mohamed)

For Eco Services India Pvt. Ltd.,



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Test Report

Report No.	: ESIPL/EMS/2020/02/2251	Date of Sampling	: 12.02.2020
Customer Name	: M/s. CHENNAI RIVERS RESTORATION TRUST	Date of Registration	: 13.02.2020
	Dr.D.G.S. Dinakaran Salai	Sample Code	: E-1770
	Raja Annamalaipuram	Test Commenced on	: 13.02.2020
	Chennai – 600 028.	Test Completed on	: 16.02.2020
Project Address	: “Integrated Cooum River Restoration Project”	Report Issuing Date	: 16.02.2020
Sample Description	:	Ambient Noise in dB(A) Leq	
Sampling Plan/Procedure	:	ESIPL/SOP/C- NL/01	
Sampling Period	:	24 Hrs	
Sample Location	:	Choolaimedu Bridge	
Category of Area/Zone	:	Commercial Area	

Time of monitoring	(NQ – 4) Result
6.00 - 7.00	59.0
7.00 - 8.00	60.2
8.00 - 9.00	61.2
9.00 - 10.00	60.3
10.00 - 11.00	62.2
11.00 - 12.00	63.1
12.00 - 13.00	63.1
13.00 - 14.00	63.7
14.00 - 15.00	62.2
15.00 - 16.00	63.4
16.00 - 17.00	63.8
17.00 - 18.00	64.8
18.00 - 19.00	65.4
19.00 - 21.00	62.9
21.00 - 21.00	61.8
21.00 - 22.00	52.2
22.00 - 23.00	53.9
23.00 - 24.00	52.2
0.00 - 1.00	54.9
1.00 - 2.00	51.5
2.00 - 3.00	54.8
3.00 - 4.00	55.7
4.00 - 5.00	54.9
5.00 - 6.00	53.2
Average Noise of Day Equivalent	62.7
Average Noise of Night Equivalent	54.0

The Noise Pollution (Regulation and Control) Rules 2000-Ambient Air Quality Standards in Respect of Noise.Leq is an energy mean of the noise level at Commercial area over a specified period of day time = 65 dB(A) Leq and Night time = 55 dB(A) Leq .

.....End of Report.....

Verified by

(M.Beer Mohamed)

For Eco Services India Pvt. Ltd.,



(M. Sivakumar)
Authorized Signatory

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Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/02/2252

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1771
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description :

Sampling Location :

Sampling Plan/Procedure :

Ground Water

Near Law's Bridge

ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	<5
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.7
03	Odour	IS 3025 Part 5 (Reaff; 2002)	Unobjectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	BDL(DL:1.0)
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	6.2
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	6.87
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	3263
08	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	BDL(DL:2.0)
09	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	5
10	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	1861
11	Salinity in g/hour	By calculation	1.2
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	BDL(DL:2.0)
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	BDL(DL:1.0)
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	BDL(DL:1.0)
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	BDL(DL:1.0)
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff:2003)	2.1
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	2.2
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	0.7
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	0.9
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	215
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	61
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	666
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	503
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	48
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	433
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	54

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

(R. Sivakumar)

For Eco Services India Pvt. Ltd.,



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Test Report

Report No. ESIPL/EMS/2020/02/2252

Page 2 of 2

S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	BDL(DL:0.1)
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.27
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.07

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Test Report

Report No. : ESIPL/EMS-M/2020/02/2252 Date of Sampling : 13.02.2020
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST Date of Registration : 13.02.2020
(Formerly Adyar Poonga Trust) Sample Code : E – 1771
Project Address : ADYAR POONGA Test Commenced on : 13.02.2020
6/103, Dr.D.G.S. Dinakaran Salai Test Completed on : 19.02.2020
Raja Annamalaipuram, Chennai – 600 028. Report Issuing Date : 20.02.2020

Sample Description : Ground Water
Sampling Location : Near Law's Bridge
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.



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Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/02/2253

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1772
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description :

Ground Water

Sampling Location :

Near Ethiraj link road

Sampling Plan/Procedure :

ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	<5
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.0
03	Odour	IS 3025 Part 5 (Reaff; 2002)	Unobjectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	BDL(DL:1.0)
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	6.6
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	7.05
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	2306
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	1314
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	BDL(DL:2.0)
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	BDL(DL:4.0)
11	Salinity in g/hour	By calculation	0.57
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	4.3
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	BDL(DL:1.0)
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	BDL(DL:1.0)
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	BDL(DL:1.0)
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff.2003)	4.5
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	4.6
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	0.26
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	0.95
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	126
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	53
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	320
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	625
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	32
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	208
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	26

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt Ltd.,



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Registered Office & Laboratory:

No.1/134, Dhanakotiraja Street, Sundar Nagar, Ekkaduthangal, Guindy, Chennai – 600 032, Tamil Nadu, India
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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. ESIPL/EMS/2020/02/2253

Page 2 of 2

S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	BDL(DL:0.1)
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.19
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.05

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by

R. Sivakumar
(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/02/2253
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST
(Formerly Adyar Poonga Trust)
Project Address : ADYAR POONGA
6/103, Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram, Chennai – 600 028.
Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E – 1772
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 20.02.2020

Sample Description : Ground Water
Sampling Location : Near Ethiraj College Link Road
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/02/2254

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 13.02.2020

Date of Registration : 13.02.2020

Sample Code : E-1773

Test Commenced on : 13.02.2020

Test Completed on : 19.02.2020

Report Issuing Date : 19.02.2020

Project Address : "Integrated Cooum River Restoration Project"

Sample Description : Ground Water
Sampling Location : Near Choolaimedu Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	<5
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.3
03	Odour	IS 3025 Part 5 (Reaff; 2002)	Unobjectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	BDL(DL:1.0)
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	7
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	6.82
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	1014
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	578
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	BDL(DL:2.0)
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	BDL(DL:4.0)
11	Salinity in g/hour	By calculation	0.23
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	BDL(DL:2.0)
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	BDL(DL:1.0)
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	BDL(DL:1.0)
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	BDL(DL:1.0)
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff.2003)	1.7
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	2.0
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	0.1
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	0.46
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	55
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	25
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	132
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	317
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	28
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	86
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	11

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

R. Sivakumar
(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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(LABORATORY DIVISION)

Test Report

Report No. ESIPL/EMS/2020/02/2254

Page 2 of 2


S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	0.1
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.21
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.08

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/02/2254 Date of Sampling : 13.02.2020
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST Date of Registration : 13.02.2020
(Formerly Adyar Poonga Trust) Sample Code : E – 1773
Project Address : ADYAR POONGA Test Commenced on : 13.02.2020
6/103, Dr.D.G.S. Dinakaran Salai Test Completed on : 19.02.2020
Raja Annamalaipuram, Chennai – 600 028. Report Issuing Date : 20.02.2020

Sample Description : Ground Water
Sampling Location : Near Choolaimedu Bridge
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.



(Dr. D. Loganathan)
Authorized Signatory

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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/02/2255

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1774
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Surface Water
Sampling Location : Nappier Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	10
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.1
03	Odour	IS 3025 Part 5 (Reaff; 2002)	Objectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	95
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	BDL(DL:1.0)
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	7.37
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	5964
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	3399
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	72
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	242
11	Salinity in g/hour	By calculation	2.7
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	119
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	26
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	21
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	2.6
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff.2003)	2.0
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	27
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	7.2
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	7.6
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	200
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	73
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	1324
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	816
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	112
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	860
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	107

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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(LABORATORY DIVISION)

Test Report

Report No. ESIPL/EMS/2020/02/2255

Page 2 of 2


S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	0.31
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.53
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.08

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/02/2255 Date of Sampling : 13.02.2020
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST Date of Registration : 13.02.2020
(Formerly Adyar Poonga Trust) Sample Code : E – 1774
Project Address : ADYAR POONGA Test Commenced on : 13.02.2020
6/103, Dr.D.G.S. Dinakaran Salai Test Completed on : 19.02.2020
Raja Annamalaipuram, Chennai – 600 028. Report Issuing Date : 20.02.2020

Sample Description : Surface Water
Sampling Location : Napier Bridge
Sampling Method : IS 1622 : 1981 Reaff 2014

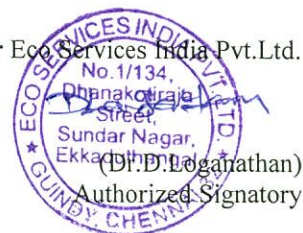
S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.



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Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/02/2256

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1775
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Surface Water
Sampling Location : Law's Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	5
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	25.7
03	Odour	IS 3025 Part 5 (Reaff; 2002)	Objectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	18
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	BDL(DL:1.0)
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	7.79
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	3072
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	1751
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	16
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	112
11	Salinity in g/hour	By calculation	1.05
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	32
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	16
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	11
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	2.0
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff:2003)	1.97
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	16
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	3.1
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	3.7
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	84
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	29
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	582
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	514
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	38
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	378
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	47

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Test Report

Report No. ESIPL/EMS/2020/02/2256

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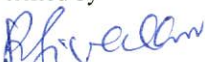
S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	0.20
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.37
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.06

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/02/2256 Date of Sampling : 13.02.2020
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST Date of Registration : 13.02.2020
(Formerly Adyar Poonga Trust) Sample Code : E – 1775
Project Address : ADYAR POONGA Test Commenced on : 13.02.2020
6/103, Dr.D.G.S. Dinakaran Salai Test Completed on : 19.02.2020
Raja Annamalaipuram, Chennai – 600 028. Report Issuing Date : 20.02.2020

Sample Description : Surface Water
Sampling Location : Law's Bridge
Sampling Method : IS 1622 : 1981 Reaff 2014

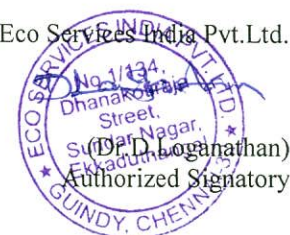
S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	<i>Faecal coliform</i>	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.



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Registered Office & Laboratory:

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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/02/2257

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1776
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Surface Water
Sampling Location : Ethiraj College link road
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	5
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.4
03	Odour	IS 3025 Part 5 (Reaff. 2002)	Objectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	73
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	BDL(DL:1.0)
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	6.91
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	2582
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	1472
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	96
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	295
11	Salinity in g/hour	By calculation	0.71
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	122
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	41
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	38
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	2.2
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff.2003)	1.7
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	40
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	7.9
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	8.2
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	91
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	44
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	397
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	737
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	101
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	258
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	32

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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(LABORATORY DIVISION)

Test Report

Report No. ESIPL/EMS/2020/02/2257

Page 2 of 2


S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	2.8
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.87
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.09

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/02/2257 Date of Sampling : 13.02.2020
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST Date of Registration : 13.02.2020
(Formerly Adyar Poonga Trust) Sample Code : E – 1776
Project Address : ADYAR POONGA Test Commenced on : 13.02.2020
6/103, Dr.D.G.S. Dinakaran Salai Test Completed on : 19.02.2020
Raja Annamalaipuram, Chennai – 600 028. Report Issuing Date : 20.02.2020

Sample Description : Surface Water
Sampling Location : Ethiraj College Link Road
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.

No. 1/134,
Dhanakotiraja
Sundar Nagar,
Ekkaduthangal,
Guindy, Chennai - 600 032.
(Dr.D.Loganathan)
Authorized Signatory

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(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/02/2258

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1777
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Surface Water
Sampling Location : Choolaimedu Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	10
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.2
03	Odour	IS 3025 Part 5 (Reaff. 2002)	Objectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	105
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	BDL(DL:1.0)
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	7.10
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	2477
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	1412
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	102
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	303
11	Salinity in g/hour	By calculation	0.74
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	148
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	40
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	34
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	2.0
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff.2003)	1.5
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	37
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	9.4
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	10.2
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	91
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	60
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	415
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	708
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	98
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	270
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	34

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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(LABORATORY DIVISION)

Test Report

Report No. **ESIPL/EMS/2020/02/2258**

Page 2 of 2


S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	2.3
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.61
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.08

Note:

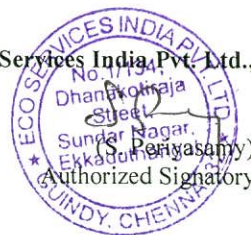
1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/02/2258 Date of Sampling : 13.02.2020
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST (Formerly Adyar Poonga Trust) Date of Registration : 13.02.2020
Project Address : ADYAR POONGA Sample Code : E – 1777
6/103, Dr.D.G.S. Dinakaran Salai Test Commenced on : 13.02.2020
Raja Annamalaipuram, Chennai – 600 028. Test Completed on : 19.02.2020
Report Issuing Date : 20.02.2020

Sample Description : Surface Water
Sampling Location : Choolaimedu Bridge
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS/2020/02/2259
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1778
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Soil-1
Sampling Location : Nappier Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/SS/01


S.No.	Test Parameters	Method	Results
01	pH @ 25°C	IS 2720 Part 26:(Reaff:2011)	7.82
02	Organic Matter in %	IS 2720 Part 22: (Reaff.2010)	0.7
03	Phosphorous as P in mg/g	ESIPL/SOP/C-S/11	53
04*	Chromium as Cr in mg/kg	EPA METHOD	BDL(DL:0.1)
05	Nitrate (Total Kjeldal Nitrogen) as N in %	IS 14684:1999 (Reaff.2008)	0.04
06*	Sediment Texture%		
	a. Percent Clay	ESIPL/SOP/C-S/04	6.7
	b. Percent Silt	ESIPL/SOP/C-S/04	60.9
	c. Percent Sand	ESIPL/SOP/C-S/04	32
07*	Sodium Adsorption Ratio (SAR) in meq/l	FAO United Nations Rome,2007	0.8
08*	Oil and Grease	EPA METHOD	BDL(DL:2)
09*	Mercury as Hg in mg/kg	EPA METHOD	BDL(DL:0.3)
10*	Nickel as Ni in mg/kg	EPA METHOD	BDL(DL:0.1)
11*	Lead as pb in mg/kg	EPA METHOD	BDL(DL:0.1)
12*	Zinc as Zn in mg/kg	EPA METHOD	32
13*	Iron as Fe in mg/kg	EPA METHOD	80

Note:

1. BDL: Below Detection Limit; DL: Detection Limit
2. The above parameters from serial No.07 to 13 not covered in our NABL Scope.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.
4. EPA: Environmental Protection Agency

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS/2020/02/2260
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1779
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Soil-2
Sampling Location : Law's Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/SS/01

S.No.	Test Parameters	Method	Results
01	pH @ 25°C	IS 2720 Part 26:(Reaff:2011)	7.33
02	Organic Matter in %	IS 2720 Part 22: (Reaff.2010)	1.1
03	Phosphorous as P in mg/g	ESIPL/SOP/C-S/11	62
04 [*]	Chromium as Cr in mg/kg	EPA METHOD	BDL(DL:0.1)
05	Nitrate (Total Kjeldal Nitrogen) as N in %	IS 14684:1999 (Reaff.2008)	0.03
06 [*]	Sediment Texture%		
	a. Percent Clay	ESIPL/SOP/C-S/04	15.2
	b. Percent Silt	ESIPL/SOP/C-S/04	46.7
	c. Percent Sand	ESIPL/SOP/C-S/04	29.1
07 [*]	Sodium Adsorption Ratio (SAR) in meq/l	FAO United Nations Rome,2007	0.60
08 [*]	Oil and Grease	EPA METHOD	BDL(DL:2)
09 [*]	Mercury as Hg in mg/kg	EPA METHOD	BDL(DL:0.3)
10 [*]	Nickel as Ni in mg/kg	EPA METHOD	BDL(DL:0.1)
11 [*]	Lead as pb in mg/kg	EPA METHOD	BDL(DL:0.1)
12 [*]	Zinc as Zn in mg/kg	EPA METHOD	21
13 [*]	Iron as Fe in mg/kg	EPA METHOD	88

Note:

1. BDL: Below Detection Limit; DL: Detection Limit
2. The above parameters from serial No.07 to 13 not covered in our NABL Scope.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.
4. EPA: Environmental Protection Agency

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Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS/2020/02/2261
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1780
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Soil-3
Sampling Location : Ethiraj college link road
Sampling Plan/Procedure : ESIPL/SOP/CA/SS/01

S.No.	Test Parameters	Method	Results
01	pH @ 25°C	IS 2720 Part 26:(Reaff:2011)	8.12
02	Organic Matter in %	IS 2720 Part 22: (Reaff.2010)	1.1
03	Phosphorous as P in mg/g	ESIPL/SOP/C-S/11	67
04*	Chromium as Cr in mg/kg	EPA METHOD	BDL(DL:0.1)
05	Nitrate (Total Kjeldal Nitrogen) as N in %	IS 14684:1999 (Reaff.2008)	0.03
06*	Sediment Texture%		
	a. Percent Clay	ESIPL/SOP/C-S/04	5.2
	b. Percent Silt	ESIPL/SOP/C-S/04	70
	c. Percent Sand	ESIPL/SOP/C-S/04	24.8
07*	Sodium Adsorption Ratio (SAR) in meq/l	FAO United Nations Rome,2007	1.0
08*	Oil and Grease	EPA METHOD	BDL(DL:2)
09*	Mercury as Hg in mg/kg	EPA METHOD	BDL(DL:0.3)
10*	Nickel as Ni in mg/kg	EPA METHOD	BDL(DL:0.1)
11*	Lead as pb in mg/kg	EPA METHOD	BDL(DL:0.1)
12*	Zinc as Zn in mg/kg	EPA METHOD	23
13*	Iron as Fe in mg/kg	EPA METHOD	96

Note:

1. BDL: Below Detection Limit; DL: Detection Limit
2. The above parameters from serial No.07 to 13 not covered in our NABL Scope.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.
4. EPA: Environmental Protection Agency

.....End of Report.....

Verified by

R. Sivakumar
(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Registered Office & Laboratory:

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Phone: (044) 30683067/43102232 E-mail: info@ecoservices.in, www.ecoservices.in



ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ES IPL/EMS/2020/02/2262
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 13.02.2020
Date of Registration : 13.02.2020
Sample Code : E-1781
Test Commenced on : 13.02.2020
Test Completed on : 19.02.2020
Report Issuing Date : 19.02.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Soil-4
Sampling Location : Choolaimedu Bridge
Sampling Plan/Procedure : ES IPL/SOP/CA/SS/01

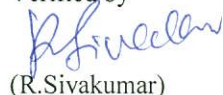
S.No.	Test Parameters	Method	Results
01	pH @ 25°C	IS 2720 Part 26:(Reaff:2011)	7.73
02	Organic Matter in %	IS 2720 Part 22: (Reaff.2010)	0.9
03	Phosphorous as P in mg/g	ES IPL/SOP/C-S/11	72
04*	Chromium as Cr in mg/kg	EPA METHOD	BDL(DL:0.1)
05	Nitrate (Total Kjeldahl Nitrogen) as N in %	IS 14684:1999 (Reaff.2008)	0.03
06*	Sediment Texture%		
	a. Percent Clay	ES IPL/SOP/C-S/04	10.2
	b. Percent Silt	ES IPL/SOP/C-S/04	64.4
	c. Percent Sand	ES IPL/SOP/C-S/04	26.4
07*	Sodium Adsorption Ratio (SAR) in meq/l	FAO United Nations Rome,2007	1.0
08*	Oil and Grease	EPA METHOD	BDL(DL:2)
09*	Mercury as Hg in mg/kg	EPA METHOD	BDL(DL:0.3)
10*	Nickel as Ni in mg/kg	EPA METHOD	BDL(DL:0.1)
11*	Lead as pb in mg/kg	EPA METHOD	BDL(DL:0.1)
12*	Zinc as Zn in mg/kg	EPA METHOD	25
13*	Iron as Fe in mg/kg	EPA METHOD	91

Note:

1. BDL: Below Detection Limit; DL: Detection Limit
2. The above parameters from serial No.07 to 13 not covered in our NABL Scope.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.
4. EPA: Environmental Protection Agency

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Registered Office & Laboratory:

No.1/134, Dhanakotiraja Street, Sundar Nagar, Ekkaduthangal, Guindy, Chennai – 600 032, Tamil Nadu, India
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(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No.	: ESIPL/EMS/2020/03/2507	Date of Sampling	: 10.03.2020
Customer Name	: M/s. CHENNAI RIVERS RESTORATION TRUST	Date of Registration	: 11.03.2020
	Dr.D.G.S. Dinakaran Salai	Sample Code	: E-2051
	Raja Annamalaipuram	Test Commenced on	: 11.03.2020
	Chennai – 600 028.	Test Completed on	: 17.03.2020
Project Address	: “Integrated Cooum River Restoration Project”	Report Issuing Date	: 17.03.2020

Sample Description	:	Ambient Air
Sampling Locations	:	Nappier Bridge
Category of Area/Zone	:	(AAQ-1)
	:	Commercial Area
Sampling Plan/Procedure	:	ESIPL/SOP/C-AA/01
Ambient Temperature during the sampling (Average)	:	30°C
Relative Humidity during the sampling (Average)	:	68%
Time and Hours of sampling	:	24 Hrs

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
01	Particulate Matter (Size Less than 10 µm) in µg/m ³	IS :5182 Part 23-RA2012	59	100
02	Particulate Matter (Size Less than 2.5 µm) in µg/m ³	ESIPL/SOP/C-AA/03	22	60
03	Sulphur dioxide in µg/m ³	IS :5182 Part 2-RA2012	7.3	80
04	Oxides of Nitrogen in µg/m ³	IS :5182 Part 6-RA2012	16.5	80
05	Ozone in µg/m ³	IS:5182 Part 9-RA2014	BDL(DL: 5.0)	180
06	Carbon Monoxide in mg/m ³	NIOSH -6604	BDL(DL:1.14)	2.0
07	Ammonia in µg/m ³	ESIPL/SOP/C-AA/07	11.8	400

BDL - Below Detection Limit; DL - Detection Limit

^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.

Verified by

R. Sivakumar
(R.Sivakumar)

.....End of page 1.....

For Eco Services India Pvt. Ltd.,



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Test Report

Report No.: ESIPL/EMS/2020/03/2507

Page 2 of 2

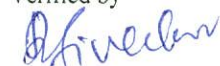
S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
08	Lead in $\mu\text{g}/\text{m}^3$	IS :5182 Part 22-2004	BDL(DL:0.001 $\mu\text{g}/\text{m}^3$)	1.0
09	Benzene in $\mu\text{g}/\text{m}^3$	IS:5182 Part 11-2006	BDL(DL:1.0 $\mu\text{g}/\text{m}^3$)	5.0
10	Benzo alpha Pyrene in ng/m^3	IS:5182 Part 12-2004; RA-2009	BDL(DL:0.8 ng/m^3)	1.0
11	Arsenic in ng/m^3	USEPA IO 3.2	BDL(DL:1.0 ng/m^3)	6.0
12	Nickel in ng/m^3	USEPA IO 3.2	BDL(DL:3.0 ng/m^3)	20.0

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. ^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.
3. The above parameters from serial No.08 to 12 not covered in our NABL Scope and subcontracted to other Laboratory.
4. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/03/2508
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 10.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2052
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ambient Air
Sampling Locations : Law's Bridge- (AAQ-2)
Category of Area/Zone : Commercial Area
Sampling Plan/Procedure : ESIPL/SOP/C-AA/01
Ambient Temperature during the sampling (Average) : 30°C
Relative Humidity during the sampling (Average) : 68%
Time and Hours of sampling : 24 Hrs

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
01	Particulate Matter (Size Less than 10 µm) in µg/m ³	IS :5182 Part 23-RA2012	61	100
02	Particulate Matter (Size Less than 2.5 µm) in µg/m ³	ESIPL/SOP/C-AA/03	19	60
03	Sulphur dioxide in µg/m ³	IS :5182 Part 2-RA2012	7.3	80
04	Oxides of Nitrogen in µg/m ³	IS :5182 Part 6-RA2012	18.8	80
05	Ozone in µg/m ³	IS:5182 Part 9-RA2014	BDL(DL: 5.0)	180
06	Carbon Monoxide in mg/m ³	NIOSH -6604	BDL(DL:1.14)	2.0
07	Ammonia in µg/m ³	ESIPL/SOP/C-AA/07	10.2	400

BDL - Below Detection Limit; DL - Detection Limit

^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.

Verified by

R. Sivakumar
(R.Sivakumar)

.....End of page 1.....

For Eco Services India Pvt. Ltd.,
Dhanakotiraja Street,
Sundar Nagar, Ekkaduthangal,
(S. Periyasamy)
Authorized Signatory

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Test Report

Report No.: ESIPL/EMS/2020/03/2508

Page 2 of 2

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
08	Lead in $\mu\text{g}/\text{m}^3$	IS :5182 Part 22-2004	BDL(DL:0.001 $\mu\text{g}/\text{m}^3$)	1.0
09	Benzene in $\mu\text{g}/\text{m}^3$	IS:5182 Part 11-2006	BDL(DL:1.0 $\mu\text{g}/\text{m}^3$)	5.0
10	Benzo alpha Pyrene in ng/m^3	IS:5182 Part 12-2004; RA-2009	BDL(DL:0.8 ng/m^3)	1.0
11	Arsenic in ng/m^3	USEPA IO 3.2	BDL(DL:1.0 ng/m^3)	6.0
12	Nickel in ng/m^3	USEPA IO 3.2	BDL(DL:3.0 ng/m^3)	20.0

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. ^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.
3. The above parameters from serial No.08 to 12 not covered in our NABL Scope and subcontracted to other Laboratory.
4. Please refer our NABL Certificate Nos. TC-5664 and Scope of Accreditation.

.....End of Report.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



(S. Periyasamy)
Authorized Signatory

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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/03/2509
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 10.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2053
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ambient Air
Sampling Locations : Ethiraj college link road (AAQ-3)
Category of Area/Zone : Commercial Area
Sampling Plan/Procedure : ESIPL/SOP/C-AA/01
Ambient Temperature during the sampling (Average) : 30°C
Relative Humidity during the sampling (Average) : 68%
Time and Hours of sampling : 24 Hrs

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
01	Particulate Matter (Size Less than 10 µm) in µg/m ³	IS :5182 Part 23-RA2012	68	100
02	Particulate Matter (Size Less than 2.5 µm) in µg/m ³	ESIPL/SOP/C-AA/03	23	60
03	Sulphur dioxide in µg/m ³	IS :5182 Part 2-RA2012	7.5	80
04	Oxides of Nitrogen in µg/m ³	IS :5182 Part 6-RA2012	19	80
05	Ozone in µg/m ³	IS:5182 Part 9-RA2014	BDL(DL: 5.0)	180
06	Carbon Monoxide in mg/m ³	NIOSH -6604	BDL(DL:1.14)	2.0
07	Ammonia in µg/m ³	ESIPL/SOP/C-AA/07	12.1	400

BDL - Below Detection Limit; DL - Detection Limit

^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.

.....End of page 1.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Test Report

Report No.: ESIPL/EMS/2020/03/2509

Page 2 of 2

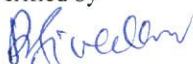
S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
08	Lead in $\mu\text{g}/\text{m}^3$	IS :5182 Part 22-2004	BDL(DL:0.001 $\mu\text{g}/\text{m}^3$)	1.0
09	Benzene in $\mu\text{g}/\text{m}^3$	IS:5182 Part 11-2006	BDL(DL:1.0 $\mu\text{g}/\text{m}^3$)	5.0
10	Benzo alpha Pyrene in ng/m^3	IS:5182 Part 12-2004; RA-2009	BDL(DL:0.8 ng/m^3)	1.0
11	Arsenic in ng/m^3	USEPA IO 3.2	BDL(DL:1.0 ng/m^3)	6.0
12	Nickel in ng/m^3	USEPA IO 3.2	BDL(DL:3.0 ng/m^3)	20.0

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. ^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.
3. The above parameters from serial No.08 to 12 not covered in our NABL Scope and subcontracted to other Laboratory.
4. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/03/2510
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 10.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2054
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ambient Air
Sampling Locations : Choolaimedu Bridge (AAQ-4)
Category of Area/Zone : Commercial Area
Sampling Plan/Procedure : ESIPL/SOP/C-AA/01
Ambient Temperature during the sampling (Average) : 30°C
Relative Humidity during the sampling (Average) : 68%
Time and Hours of sampling : 24 Hrs

S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
01	Particulate Matter (Size Less than 10 µm) in µg/m ³	IS :5182 Part 23-RA2012	54	100
02	Particulate Matter (Size Less than 2.5 µm) in µg/m ³	ESIPL/SOP/C-AA/03	17	60
03	Sulphur dioxide in µg/m ³	IS :5182 Part 2-RA2012	6.1	80
04	Oxides of Nitrogen in µg/m ³	IS :5182 Part 6-RA2012	17.4	80
05	Ozone in µg/m ³	IS:5182 Part 9-RA2014	BDL(DL: 5.0)	180
06	Carbon Monoxide in mg/m ³	NIOSH -6604	BDL(DL:1.14)	2.0
07	Ammonia in µg/m ³	ESIPL/SOP/C-AA/07	BDL(DL: 5.0)	400

BDL - Below Detection Limit; DL - Detection Limit

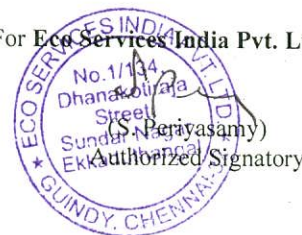
^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.

Verified by

(R.Sivakumar)

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For Eco Services India Pvt. Ltd.,



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Test Report

Report No.: ESIPL/EMS/2020/03/2510

Page 2 of 2

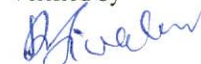
S.No.	Parameters	Test Method	Result	NAAQ STANDARD ^s
08	Lead in $\mu\text{g}/\text{m}^3$	IS :5182 Part 22-2004	BDL(DL:0.001 $\mu\text{g}/\text{m}^3$)	1.0
09	Benzene in $\mu\text{g}/\text{m}^3$	IS:5182 Part 11-2006	BDL(DL:1.0 $\mu\text{g}/\text{m}^3$)	5.0
10	Benzo alpha Pyrene in ng/m^3	IS:5182 Part 12-2004; RA-2009	BDL(DL:0.8 ng/m^3)	1.0
11	Arsenic in ng/m^3	USEPA IO 3.2	BDL(DL:1.0 ng/m^3)	6.0
12	Nickel in ng/m^3	USEPA IO 3.2	BDL(DL:3.0 ng/m^3)	20.0

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. ^s Air (Prevention and Control of Pollution) Act 1981, National Ambient Air Quality Standards, CPCB Notification dated 18th November 2009.
3. The above parameters from serial No.08 to 12 not covered in our NABL Scope and subcontracted to other Laboratory.
4. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Test Report

Report No. : ESIPL/EMS/2020/03/2511	Date of Sampling : 10.03.2020
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST	Date of Registration : 11.03.2020
Dr.D.G.S. Dinakaran Salai	Sample Code : E-2055
Raja Annamalaipuram	Test Commenced on : 11.03.2020
Chennai – 600 028.	Test Completed on : 17.03.2020
	Report Issuing Date : 17.03.2020
Project Address : “Integrated Cooum River Restoration Project”	
Sample Description :	Ambient Noise in dB(A) Leq
Sampling Plan/Procedure :	ESIPL/SOP/C- NL/01
Sampling Period :	24 Hrs
Sample Location :	Neppiar’s Bridge
Category of Area/Zone :	Commercial Area

Time of monitoring	(NQ – 1) Result
6.00 - 7.00	59.1
7.00 - 8.00	58.4
8.00 - 9.00	59.3
9.00 - 10.00	60.5
10.00 - 11.00	62.4
11.00 - 12.00	63.8
12.00 - 13.00	62.9
13.00 - 14.00	60.7
14.00 - 15.00	64.3
15.00 - 16.00	62.9
16.00 - 17.00	64.1
17.00 - 18.00	62.7
18.00 - 19.00	60.5
19.00 - 21.00	63.1
21.00 - 21.00	62.5
21.00 - 22.00	59.9
22.00 - 23.00	54.3
23.00 - 24.00	52.6
0.00 - 1.00	53.2
1.00 - 2.00	52.9
2.00 - 3.00	53.6
3.00 - 4.00	52.7
4.00 - 5.00	51.9
5.00 - 6.00	54.0
Average Noise of Day Equivalent	62.1
Average Noise of Night Equivalent	53.2

The Noise Pollution (Regulation and Control) Rules 2000-Ambient Air Quality Standards in Respect of Noise. Leq is an energy mean of the noise level at Commercial area over a specified period of day time = 65 dB(A) Leq and Night time = 55 dB(A) Leq .

.....End of Report.....

Verified by
M. Beer Mohamed
(M. Beer Mohamed)

For Eco Services India Pvt. Ltd.,
No. 1/134, Dhanakotiraja Street, Sundar Nagar, Ekkaduthangal, Guindy, Chennai - 600 032, Tamil Nadu, India
(R. Sivakumar)
Authorized Signatory



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Phone: (044) 30683067/43102232 E-mail: info@ecoservices.in, www.ecoservices.in



ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS/2020/03/2512
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 10.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2056
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ambient Noise in dB(A) Leq
Sampling Plan/Procedure : ESIPL/SOP/C- NL/01
Sampling Period : 24 Hrs
Sample Location : Law's Bridge
Category of Area/Zone : Commercial Area

Time of monitoring	(NQ – 2) Result
6.00 - 7.00	59.6
7.00 - 8.00	58.7
8.00 - 9.00	59.2
9.00 - 10.00	58.9
10.00 - 11.00	60.7
11.00 - 12.00	64.1
12.00 - 13.00	62.4
13.00 - 14.00	63.2
14.00 - 15.00	61.8
15.00 - 16.00	62.2
16.00 - 17.00	60.4
17.00 - 18.00	62.1
18.00 - 19.00	63.5
19.00 - 21.00	62.9
21.00 - 21.00	60.6
21.00 - 22.00	55.9
22.00 - 23.00	53.9
23.00 - 24.00	55.5
0.00 - 1.00	52.2
1.00 - 2.00	52.4
2.00 - 3.00	52.9
3.00 - 4.00	53.9
4.00 - 5.00	54.4
5.00 - 6.00	53.6
Average Noise of Day Equivalent	61.6
Average Noise of Night Equivalent	54.1

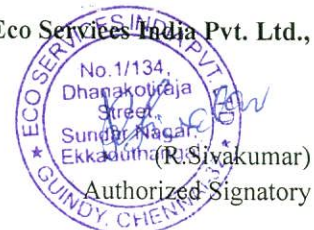
The Noise Pollution (Regulation and Control) Rules 2000-Ambient Air Quality Standards in Respect of Noise. Leq is an energy mean of the noise level at Commercial area over a specified period of day time = 65 dB(A) Leq and Night time = 55 dB(A) Leq .

.....End of Report.....

Verified by


(M.Beer Mohamed)

For Eco Services India Pvt. Ltd.,



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Phone: (044) 30683067/43102232 E-mail: info@ecoservices.in, www.ecoservices.in



ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS/2020/03/2513
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 10.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2057
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ambient Noise in dB(A) Leq
Sampling Plan/Procedure : ESIPL/SOP/C- NL/01
Sampling Period : 24 Hrs
Sample Location : Ethiraj college link road
Category of Area/Zone : Commercial Area

Time of monitoring	(NQ – 3) Result
6.00 - 7.00	58.8
7.00 - 8.00	59.1
8.00 - 9.00	60.7
9.00 - 10.00	62.1
10.00 - 11.00	63.2
11.00 - 12.00	62.1
12.00 - 13.00	64.2
13.00 - 14.00	62.4
14.00 - 15.00	63.1
15.00 - 16.00	62.9
16.00 - 17.00	62.2
17.00 - 18.00	63.5
18.00 - 19.00	61.8
19.00 - 20.00	62.2
20.00 - 21.00	61.7
21.00 - 22.00	60.3
22.00 - 23.00	54.1
23.00 - 24.00	53.6
0.00 - 1.00	54.2
1.00 - 2.00	53.5
2.00 - 3.00	52.9
3.00 - 4.00	54.1
4.00 - 5.00	53.6
5.00 - 6.00	52.4
Average Noise of Day Equivalent	62.1
Average Noise of Night Equivalent	53.5

The Noise Pollution (Regulation and Control) Rules 2000-Ambient Air Quality Standards in Respect of Noise. Leq is an energy mean of the noise level at Commercial area over a specified period of day time = 65 dB(A) Leq and Night time = 55 dB(A) Leq

.....End of Report.....

Verified by


(M. Beer Mohamed)

For Eco Services India Pvt. Ltd.,
Dhanakotiraja Street,
Sundar Nagar, Ekkaduthangal,
Chennai - 600 032.
(R. Sivakumar)
Authorized Signatory

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Test Report

Report No.	: ESIPL/EMS/2020/03/2514	Date of Sampling	: 10.03.2020
Customer Name	: M/s. CHENNAI RIVERS RESTORATION TRUST	Date of Registration	: 11.03.2020
	Dr.D.G.S. Dinakaran Salai	Sample Code	: E-2058
	Raja Annamalaipuram	Test Commenced on	: 11.03.2020
	Chennai – 600 028.	Test Completed on	: 17.03.2020
Project Address	: “Integrated Cooum River Restoration Project”	Report Issuing Date	: 17.03.2020
Sample Description	:	Ambient Noise in dB(A) Leq	
Sampling Plan/Procedure	:	ESIPL/SOP/C- NL/01	
Sampling Period	:	24 Hrs	
Sample Location	:	Choolaimedu Bridge	
Category of Area/Zone	:	Commercial Area	

Time of monitoring	(NQ – 4) Result
6.00 - 7.00	58.5
7.00 - 8.00	59.2
8.00 - 9.00	65.7
9.00 - 10.00	63.9
10.00 - 11.00	66.9
11.00 - 12.00	65.1
12.00 - 13.00	63.4
13.00 - 14.00	65.8
14.00 - 15.00	62.1
15.00 - 16.00	62.9
16.00 - 17.00	63.7
17.00 - 18.00	64.1
18.00 - 19.00	63.7
19.00 - 21.00	64.2
21.00 - 21.00	63.4
21.00 - 22.00	59.7
22.00 - 23.00	52.1
23.00 - 24.00	55.8
0.00 - 1.00	55.9
1.00 - 2.00	54.7
2.00 - 3.00	48.9
3.00 - 4.00	50.7
4.00 - 5.00	51.2
5.00 - 6.00	54.4
Average Noise of Day Equivalent	63.9
Average Noise of Night Equivalent	54.8

The Noise Pollution (Regulation and Control) Rules 2000-Ambient Air Quality Standards in Respect of Noise. Leq is an energy mean of the noise level at Commercial area over a specified period of day time = 65 dB(A) Leq and Night time = 55 dB(A) Leq .

.....End of Report.....

Verified by


(M. Beer Mohamed)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

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Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/03/2518

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2062
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020

Project Address : "Integrated Cooum River Restoration Project"

Sample Description : Surface Water
Sampling Location : Napier Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	15
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.5
03	Odour	IS 3025 Part 5 (Reaff; 2002)	Objectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	26
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	BDL(DL:1.0)
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	6.82
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	1946
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	1090
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	10
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	45
11	Salinity in g/hour	By calculation	0.74
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	35
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	16
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	5
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	2.1
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff.2003)	0.6
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	19
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	2.9
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	3.5
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	69
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	20
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	410
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	162
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	102
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	306
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	9

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

(R. Sivakumar)

For Eco Services India Pvt. Ltd.,

(S. Periyasamy)
Authorized Signatory

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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. ESIPL/EMS/2020/03/2518

Page 2 of 2


S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	0.3
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.44
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.05

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

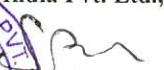
.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,




(S. Periyasamy)
Authorized Signatory

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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/03/2518
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST
(Formerly Adyar Poonga Trust)
Project Address : ADYAR POONGA
6/103, Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram, Chennai – 600 028.
Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E – 2062
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 18.03.2020

Sample Description : Surface Water
Sampling Location : Napier Bridge
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.
No. 1/134,
Dhanakotiraja Street,
Sundar Nagar,
Ekkaduthangal,
Guindy, Chennai - 600 032.
(Dr. D. Loganathan)
Authorized Signatory

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ECO SERVICES INDIA PVT. LTD.

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Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/03/2519

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2063
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Surface Water
Sampling Location : Law's Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	15
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.7
03	Odour	IS 3025 Part 5 (Reaff; 2002)	Objectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	12
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	BDL(DL:1.0)
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	7.26
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	2642
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	1480
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	29
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	142
11	Salinity in g/hour	By calculation	0.71
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	39
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	25
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	18
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	13
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff:2003)	2.6
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	40.8
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	9.5
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	13.8
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	194
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	49
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	396
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	442
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	99
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	266
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	26

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

R. Sivakumar
(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Test Report

Report No. ESIPL/EMS/2020/03/2519

Page 2 of 2


S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	0.24
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.32
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.06

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Test Report

Report No. : ESIPL/EMS-M/2020/03/2519 Date of Sampling : 11.03.2020
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST Date of Registration : 11.03.2020
(Formerly Adyar Poonga Trust) Sample Code : E – 2063
Project Address : ADYAR POONGA Test Commenced on : 11.03.2020
6/103, Dr.D.G.S. Dinakaran Salai Test Completed on : 17.03.2020
Raja Annamalaipuram, Chennai – 600 028. Report Issuing Date : 18.03.2020

Sample Description : Surface Water
Sampling Location : Law's Bridge
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.



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Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/03/2520

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 11.03.2020

Date of Registration : 11.03.2020

Sample Code : E-2064

Test Commenced on : 11.03.2020

Test Completed on : 17.03.2020

Report Issuing Date : 17.03.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Surface Water
Sampling Location : Ethiraj College link road
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	10
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.4
03	Odour	IS 3025 Part 5 (Reaff. 2002)	Objectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	10
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	BDL(DL:1.0)
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	7.12
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	2328
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	1301
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	30
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	228
11	Salinity in g/hour	By calculation	0.73
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	31
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	43
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	25
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	20
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff:2003)	6.3
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	69.1
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	3.6
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	4.9
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	96
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	24
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	402
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	404
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	82
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	261
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	18

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Registered Office & Laboratory:

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Phone: (044) 30683067/43102232 E-mail: info@ecoservices.in, www.ecoservices.in



ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. ESIPL/EMS/2020/03/2520

Page 2 of 2

S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	0.5
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.78
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.08

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/03/2520 Date of Sampling : 11.03.2020
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST Date of Registration : 11.03.2020
(Formerly Adyar Poonga Trust) Sample Code : E – 2064
Project Address : ADYAR POONGA Test Commenced on : 11.03.2020
6/103, Dr.D.G.S. Dinakaran Salai Test Completed on : 17.03.2020
Raja Annamalaipuram, Chennai – 600 028. Report Issuing Date : 18.03.2020

Sample Description : Surface Water
Sampling Location : Ethiraj College Link Road
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt. Ltd.

No.1/134,
Dhanakotiraja
Street,
Sundar Nagar,
(Dr.D.Loganathan)
Authorized Signatory

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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/03/2521

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 11.03.2020

Date of Registration : 11.03.2020

Sample Code : E-2065

Test Commenced on : 11.03.2020

Test Completed on : 17.03.2020

Report Issuing Date : 17.03.2020

Project Address : "Integrated Cooum River Restoration Project"

Sample Description : Surface Water
Sampling Location : Choolaimedu Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	20
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.4
03	Odour	IS 3025 Part 5 (Reaff; 2002)	Objectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	6
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	BDL(DL:1.0)
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	6.92
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	3082
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	1726
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	13
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	112
11	Salinity in g/hour	By calculation	0.72
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	18
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	20
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	12
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	4
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff.2003)	1.3
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	25.3
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	5.2
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	6.6
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	286
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	121
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	396
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	426
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	139
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	285
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	20

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

R. Sivakumar
(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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(LABORATORY DIVISION)

Test Report

Report No. ESIPL/EMS/2020/03/2521

Page 2 of 2

S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	0.14
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.52
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.07

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/03/2521 Date of Sampling : 11.02.2020
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST Date of Registration : 11.02.2020
(Formerly Adyar Poonga Trust) Sample Code : E – 2065
Project Address : ADYAR POONGA Test Commenced on : 11.02.2020
6/103, Dr.D.G.S. Dinakaran Salai Test Completed on : 18.02.2020
Raja Annamalaipuram, Chennai – 600 028. Report Issuing Date : 19.02.2020

Sample Description : Surface Water
Sampling Location : Choolaimedu Bridge
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/03/2515

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2019
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ground Water
Sampling Location : Near Law's Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	<5
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.4
03	Odour	IS 3025 Part 5 (Reaff; 2002)	Unobjectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	BDL(DL:1.0)
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	6.0
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	7.29
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	4656
08	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	BDL(DL:2.0)
09	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	5
10	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	2609
11	Salinity in g/hour	By calculation	2.20
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	3.6
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	BDL(DL:1.0)
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	BDL(DL:1.0)
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	BDL(DL:1.0)
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff:2003)	8.2
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	10.6
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	0.5
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	0.9
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	66
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	123
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	1203
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	383
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	92
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	703
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	35

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. ESIPL/EMS/2020/03/2515

Page 2 of 2

S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	BDL(DL:0.1)
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.21
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.06

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by

R. Sivakumar
(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/03/2515 Date of Sampling : 11.03.2020
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST Date of Registration : 11.03.2020
(Formerly Adyar Poonga Trust) Sample Code : E – 2019
Project Address : ADYAR POONGA Test Commenced on : 11.03.2020
6/103, Dr.D.G.S. Dinakaran Salai Test Completed on : 17.03.2020
Raja Annamalaipuram, Chennai – 600 028. Report Issuing Date : 18.03.2020

Sample Description : Ground Water
Sampling Location : Near Law's Bridge
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt. Ltd.



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/03/2516

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2060
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020

Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Ground Water
Sampling Location : Near Ethiraj link road
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	<5
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.5
03	Odour	IS 3025 Part 5 (Reaff. 2002)	Unobjectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	BDL(DL:1.0)
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	6.3
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	7.06
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	1719
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	963
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	BDL(DL:2.0)
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	BDL(DL:4.0)
11	Salinity in g/hour	By calculation	0.43
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	2.5
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	BDL(DL:1.0)
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	BDL(DL:1.0)
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	BDL(DL:1.0)
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff:2003)	4.4
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	6
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	1.2
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	1.8
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	73
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	21
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	243
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	421
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	43
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	145
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	8

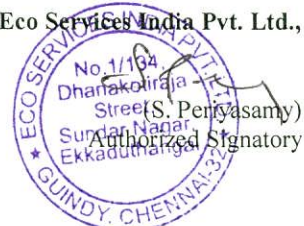
BDL: Below Detection Limit

.....End of Page 1.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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Registered Office & Laboratory:

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Phone: (044) 30683067/43102232 E-mail: info@ecoservices.in, www.ecoservices.in



ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. ESIPL/EMS/2020/03/2516

Page 2 of 2


S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	0.14
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.18
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.05

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

.....End of Report.....

Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/03/2516
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST
(Formerly Adyar Poonga Trust)
Project Address : ADYAR POONGA
6/103, Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram, Chennai – 600 028.
Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E – 2060
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 18.03.2020

Sample Description : Ground Water
Sampling Location : Near Ethiraj College Link Road
Sampling Method : IS 1622 : 1981 Reaff 2014

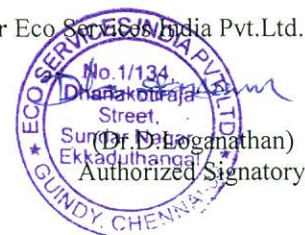
S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

.....End of Page.....

For Eco Services India Pvt.Ltd.



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Registered Office & Laboratory:

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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Page 1 of 2

Report No. : ESIPL/EMS/2020/03/2517

Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.

Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2061
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020

Project Address : "Integrated Cooum River Restoration Project"

Sample Description : Ground Water
Sampling Location : Near Choolaimedu Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/WSA/01

S. No.	Parameter (Characteristic)	Method of Test	Test Result
General Parameters:			
01	Colour	IS 3025: Part 4 (Reaff.2006)	<5
02	Temperature in °C	IS 3025 : Part 9 (Reaff.2006)	26.2
03	Odour	IS 3025 Part 5 (Reaff; 2002)	Unobjectionable
04	Turbidity in NTU	IS 3025 : Part 10 (Reaff.2002)	BDL(DL:1.0)
05	Dissolved Oxygen in mg/l	IS 3025 : Part 38(Reaff.2009)	6.5
06	pH @ 25°C	IS 3025 : Part 11 (Reaff.2013)	7.56
07	Electrical Conductivity @ 25°C in µmhos/cm	IS 3025 : Part 14 (Reaff.2013)	1642
08	Total Dissolved Solids in mg/l	IS 3025 : Part 16 (Reaff.2009)	920
09	Biochemical Oxygen Demand as BOD in mg/l	IS 3025:Part 44 (Reaff.2009)	BDL(DL:2.0)
10	Chemical Oxygen Demand as COD in mg/l	IS 3025 : Part 58 (Reaff 2012)	6
11	Salinity in g/hour	By calculation	0.39
12	Total Suspended Solids as TSS in mg/l	IS 3025 : Part 17 (Reaff.2012)	4.2
Nutrients Parameters:			
13	Total Kjeldal Nitrogen in mg/l	IS 3025 : Part 34 (Reaff.2003)	BDL(DL:1.0)
14	Ammonia as NH ₃ in mg/l	IS 3025: Part 34 (Reaff.2009)	BDL(DL:1.0)
15	Nitrite as NO ₂ in mg/l	IS 3025 : Part 34 (Reaff.2009)	BDL(DL:1.0)
16	Nitrate as NO ₃ in mg/l	IS 3025: Part 34 (Reaff.2003)	4.2
17	Total Nitrogen as N in mg/l	IS 3025 : Part 34 (Reaff.2009)	6.5
18	Inorganic Phosphate as PO ₄ in mg/l	IS 3025 : Part 31 (Reaff.2009)	0.2
19	Total Phosphorus as P in mg/l	IS 3025 : Part 31 (Reaff.2009)	0.5
Major Ions Parameters:			
20	Calcium as Ca in mg/l	IS 3025 : Part 40(Reaff.2009)	102
21	Magnesium as Mg in mg/l	IS 3025: Part 46 (Reaff.2009)	25
22	Chloride as Cl in mg/l	IS 3025 : Part 32 (Reaff.2009)	216
23	Carbonate as CO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	NIL
24	Bicarbonate as HCO ₃ in mg/l	IS 3025: Part 51 (Reaff.2012)	356
25	Sulphate as SO ₄ in mg/l	IS 3025 : Part 24 (Reaff.1992)	36
26	Sodium as Na in mg/l	IS 3025 : Part 45 (Reaff.2009)	153
27	Potassium as K in mg/l	IS 3025 : Part 45 (Reaff.2009)	16

BDL: Below Detection Limit

.....End of Page 1.....

Verified by

R. Sivakumar
(R. Sivakumar)

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Test Report

Report No. ESIPL/EMS/2020/03/2517

Page 2 of 2

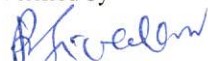
S.No.	Parameter (Characteristic)	Method of Test	Test Result
Toxic Metals Parameters:			
28	Chromium as Cr in mg/l	IS 3025: Part 52(Reaff.2009)	BDL(DL:0.1)
29	Nickel as Ni in mg/l	IS 3025:Part 54 (Reaff.2009)	BDL(DL:0.1)
30	Iron as Fe in mg/l	IS 3025:Part 53 (Reaff.2009)	BDL(DL:0.1)
31	Arsenic as As in mg/l	APHA 22 nd Edition 3500 As	BDL(DL:0.01)
32	Lead as Pb in mg/l	APHA 22 nd Edition 3500 Pb	0.26
33	Mercury as Hg in mg/l	APHA 22 nd Edition 3500 Hg	BDL(DL:0.0005)
34	Cadmium as Cd in mg/l	APHA 22 nd Edition 3500 Cd	0.07

Note:

1. BDL - Below Detection Limit; DL - Detection Limit
2. The above parameters from serial No.31 to 34 not covered in our NABL Scope and subcontracted to other Laboratory.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.

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Verified by


(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS-M/2020/03/2517
Customer Name : M/S. CHENNAI RIVERS RESTORATION TRUST
(Formerly Adyar Poonga Trust)
Project Address : ADYAR POONGA
6/103, Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram, Chennai – 600 028.
Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E – 2061
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 18.03.2020

Sample Description : Ground Water
Sampling Location : Near Choolaimedu Bridge
Sampling Method : IS 1622 : 1981 Reaff 2014

S.No	Parameter (Characteristic)	Method of Test	Unit	Test Result
01	Total Coliform	APHA 23 rd Edition - 9221-B	MPN/100ml	> 1600
02	Faecal coliform	APHA 23 rd Edition -9221-F	MPN/100ml	> 1600

Note:

MPN – Most Probable Number.

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For Eco Services India Pvt.Ltd.



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS/2020/03/2522
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2066
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Soil-1
Sampling Location : Nappier Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/SS/01

S.No.	Test Parameters	Method	Results
01	pH @ 25°C	IS 2720 Part 26:(Reaff:2011)	8.21
02	Organic Matter in %	IS 2720 Part 22: (Reaff.2010)	0.6
03	Phosphorous as P in mg/g	ESIPL/SOP/C-S/11	63
04*	Chromium as Cr in mg/kg	EPA METHOD	BDL(DL:0.1)
05	Nitrate (Total Kjeldal Nitrogen) as N in %	IS 14684:1999 (Reaff.2008)	0.05
06*	Sediment Texture%		
	a. Percent Clay	ESIPL/SOP/C-S/04	6.1
	b. Percent Silt	ESIPL/SOP/C-S/04	65
	c. Percent Sand	ESIPL/SOP/C-S/04	27
07*	Sodium Adsorption Ratio (SAR) in meq/l	FAO United Nations Rome,2007	0.5
08*	Oil and Grease	EPA METHOD	BDL(DL:2)
09*	Mercury as Hg in mg/kg	EPA METHOD	BDL(DL:0.3)
10*	Nickel as Ni in mg/kg	EPA METHOD	BDL(DL:0.1)
11*	Lead as pb in mg/kg	EPA METHOD	BDL(DL:0.1)
12*	Zinc as Zn in mg/kg	EPA METHOD	29
13*	Iron as Fe in mg/kg	EPA METHOD	84

Note:

1. BDL: Below Detection Limit; DL: Detection Limit
2. The above parameters from serial No.07 to 13 not covered in our NABL Scope.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.
4. EPA: Environmental Protection Agency

.....End of Report.....

Verified by

(R.Sivakumar)

For Eco Services India Pvt. Ltd.,



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ECO SERVICES INDIA PVT. LTD.

(LABORATORY DIVISION)

Test Report

Report No. : ESIPL/EMS/2020/03/2523
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2067
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Soil-2
Sampling Location : Law's Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/SS/01

S.No.	Test Parameters	Method	Results
01	pH @ 25°C	IS 2720 Part 26:(Reaff:2011)	7.62
02	Organic Matter in %	IS 2720 Part 22: (Reaff.2010)	1.4
03	Phosphorous as P in mg/g	ESIPL/SOP/C-S/11	70
04*	Chromium as Cr in mg/kg	EPA METHOD	BDL(DL:0.1)
05	Nitrate (Total Kjeldal Nitrogen) as N in %	IS 14684:1999 (Reaff.2008)	0.02
06*	Sediment Texture%		
	a. Percent Clay	ESIPL/SOP/C-S/04	13
	b. Percent Silt	ESIPL/SOP/C-S/04	55
	c. Percent Sand	ESIPL/SOP/C-S/04	29
07*	Sodium Adsorption Ratio (SAR) in meq/l	FAO United Nations Rome,2007	0.95
08*	Oil and Grease	EPA METHOD	BDL(DL:2)
09*	Mercury as Hg in mg/kg	EPA METHOD	BDL(DL:0.3)
10*	Nickel as Ni in mg/kg	EPA METHOD	BDL(DL:0.1)
11*	Lead as pb in mg/kg	EPA METHOD	BDL(DL:0.1)
12*	Zinc as Zn in mg/kg	EPA METHOD	22
13*	Iron as Fe in mg/kg	EPA METHOD	91

Note:

1. BDL: Below Detection Limit; DL: Detection Limit
2. The above parameters from serial No.07 to 13 not covered in our NABL Scope.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.
4. EPA: Environmental Protection Agency

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Verified by

(R.Sivakumar)

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Test Report

Report No. : ESIPL/EMS/2020/03/2524
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2068
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Soil-3
Sampling Location : Ethiraj college link road
Sampling Plan/Procedure : ESIPL/SOP/CA/SS/01


S.No.	Test Parameters	Method	Results
01	pH @ 25°C	IS 2720 Part 26:(Reaff:2011)	8.41
02	Organic Matter in %	IS 2720 Part 22: (Reaff.2010)	0.9
03	Phosphorous as P in mg/g	ESIPL/SOP/C-S/11	68
04*	Chromium as Cr in mg/kg	EPA METHOD	BDL(DL:0.1)
05	Nitrate (Total Kjeldahl Nitrogen) as N in %	IS 14684:1999 (Reaff.2008)	0.04
06*	Sediment Texture%		
	a. Percent Clay	ESIPL/SOP/C-S/04	6.2
	b. Percent Silt	ESIPL/SOP/C-S/04	75
	c. Percent Sand	ESIPL/SOP/C-S/04	17.1
07*	Sodium Adsorption Ratio (SAR) in meq/l	FAO United Nations Rome,2007	1.5
08*	Oil and Grease	EPA METHOD	BDL(DL:2)
09*	Mercury as Hg in mg/kg	EPA METHOD	BDL(DL:0.3)
10*	Nickel as Ni in mg/kg	EPA METHOD	BDL(DL:0.1)
11*	Lead as pb in mg/kg	EPA METHOD	BDL(DL:0.1)
12*	Zinc as Zn in mg/kg	EPA METHOD	25
13*	Iron as Fe in mg/kg	EPA METHOD	102

Note:

1. BDL: Below Detection Limit; DL: Detection Limit
2. The above parameters from serial No.07 to 13 not covered in our NABL Scope.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.
4. EPA: Environmental Protection Agency

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Verified by


(R.Sivakumar)

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Test Report

Report No. : ESIPL/EMS/2020/03/2525
Customer Name : M/s. CHENNAI RIVERS RESTORATION TRUST
Dr.D.G.S. Dinakaran Salai
Raja Annamalaipuram
Chennai – 600 028.
Date of Sampling : 11.03.2020
Date of Registration : 11.03.2020
Sample Code : E-2069
Test Commenced on : 11.03.2020
Test Completed on : 17.03.2020
Report Issuing Date : 17.03.2020
Project Address : “Integrated Cooum River Restoration Project”

Sample Description : Soil-4
Sampling Location : Choolaimedu Bridge
Sampling Plan/Procedure : ESIPL/SOP/CA/SS/01

S.No.	Test Parameters	Method	Results
01	pH @ 25°C	IS 2720 Part 26:(Reaff:2011)	8.86
02	Organic Matter in %	IS 2720 Part 22: (Reaff.2010)	0.9
03	Phosphorous as P in mg/g	ESIPL/SOP/C-S/11	80
04*	Chromium as Cr in mg/kg	EPA METHOD	BDL(DL:0.1)
05	Nitrate (Total Kjeldal Nitrogen) as N in %	IS 14684:1999 (Reaff.2008)	0.02
06*	Sediment Texture%		
	a. Percent Clay	ESIPL/SOP/C-S/04	9
	b. Percent Silt	ESIPL/SOP/C-S/04	68
	c. Percent Sand	ESIPL/SOP/C-S/04	21
07*	Sodium Adsorption Ratio (SAR) in meq/l	FAO United Nations Rome,2007	0.8
08*	Oil and Grease	EPA METHOD	BDL(DL:2)
09*	Mercury as Hg in mg/kg	EPA METHOD	BDL(DL:0.3)
10*	Nickel as Ni in mg/kg	EPA METHOD	BDL(DL:0.1)
11*	Lead as pb in mg/kg	EPA METHOD	BDL(DL:0.1)
12*	Zinc as Zn in mg/kg	EPA METHOD	28
13*	Iron as Fe in mg/kg	EPA METHOD	95

Note:

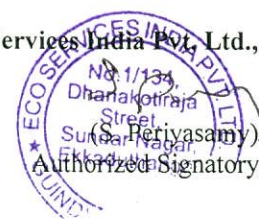
1. BDL: Below Detection Limit; DL: Detection Limit
2. The above parameters from serial No.07 to 13 not covered in our NABL Scope.
3. Please refer our NABL Certificate Nos. TC-5664 Scope of Accreditation.
4. EPA: Environmental Protection Agency

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