



# Chennai Metro Rail Limited

(A Joint Venture of Govt. of India and Govt. of Tamil Nadu)

(ISO 9001:2015 and ISO 14001:2015 Certified)

Letter No. CMRL/CON/ES/1020/2024

Dated: 14.11.2024

To,

Dr. V. George Jenner, IFS,  
Deputy Director General of Forests (C),  
Ministry of Environment, Forest and Climate Change,  
Integrated Regional Office,  
1<sup>st</sup> Floor, Additional Office Block for GPOA,  
Shastri Bhawan, Haddows Road  
Nungambakkam, Chennai – 600 034.

Dear Sir,

**Sub:** Submission of Six-Monthly Monitoring report (CRZ Clearance) for the period of March 2024 to August 2024 for the Construction of Metro Rail Network – Corridor 3 (Madhavaram to SIPCOT) having total length of the corridor as 45.813 km comprising 50 stations (30 underground stations and 20 elevated stations) in Chennai, TamilNadu by M/s Chennai Metro Rail Limited (CMRL) - Reg.

**Ref:** CRZ Clearance Letter No F.No.11-39/2022-IA.III dated 28<sup>th</sup> February 2023.

With reference to the Part B - General Conditions, Condition no. (vii) stipulated in the CRZ Clearance cited above we are submitting herewith the six-monthly monitoring report (March 2024 to August 2024) along with necessary supporting documents for your kind information and perusal.

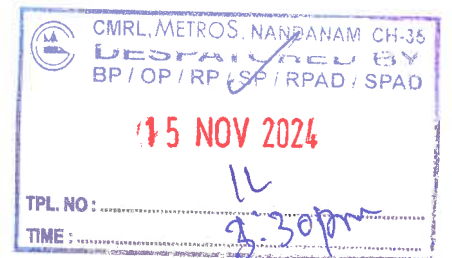
We wish to mention that all the necessary actions are being taken in compliance to the specific and general conditions of CRZ Clearance granted to the project.

We trust that the information furnished is in line with your requirement.

Thanking You.

Yours Sincerely,

  
14/11/2024.  
**Saravana Kumar R,**  
Manager - Environment.



Enclosure: As stated above

METROS, Anna Salai, Nandanam, Chennai - 600 035.

Phone: 044-2437 8000 / Email: chennaimetrorail@cmrl.in / Website: www.chennaimetrorail.org

CIN : U60100TN2007SGC065596

**Six Monthly Monitoring Report for CRZ Clearance issued by MoEF&CC, New Delhi vide letter . F. No. 11-39/2022-IA.III, dated 28<sup>th</sup> February 2023 for Construction of Metro Rail Network – Corridor 3 (Madhavaram to SIPCOT) having total length of the Corridor as 45.813 km comprising 50 stations (30 underground stations and 20 elevated stations) in Chennai, Tamil Nadu by M/s Chennai Metro Rail Limited (CMRL).**

**Part A – Specific Conditions**

<b>S. No.</b>	<b>Description</b>	<b>Status of Compliance / Remarks</b>
i.	All construction shall be strictly by the provisions of CRZ Notification, 2011 and as amended from time to time.	<b>Noted.</b> The recommendation/ conditions applicable for construction stage are compiled as per CRZ Notification 2011 and its amendments.
ii.	During the construction the vibration levels shall be monitored regularly at 200m on either side of alignment at receptors comprising educational, medical, and physical cultural buildings and other fragile buildings.	<b>Being Complied.</b> Vibration levels are monitored regularly during construction at 200 m on either side of the alignment.
iii.	The Ground Penetrating Radar (GPR) measurements before and after tunneling should be taken up loose strata identified from geotechnical data along alignment and regular compliance report should be submitted to Regional Office.	<b>Noted and Agreed to Comply.</b> The GPR measurements will be monitored before and after tunneling in the CRZ areas.
iv.	No ground water shall be extracted within the CRZ area to meet water requirements during the construction and/or operational phase of the project.	<b>Being Complied.</b> No ground water within the CRZ area was extracted during the construction or operation phase of the project.
v.	The project proponent shall ensure the natural flow of the creek water at the project site.	<b>Being Complied.</b> No blockage of river or creek is envisaged in our project proposal. Proper care was taken to ensure free flow of water throughout the project.
vi.	No excavated material during the construction shall be dumped in water bodies or adjacent areas. The site shall be restored to its near original condition after completion of construction.	<b>Noted and agreed to comply.</b> CMRL will ensure that no excavated materials will be dumped in the water bodies or adjacent areas.
vii.	Permanent labour camp, machinery and material storage shall not be set up in the CRZ area.	<b>Complied.</b> Labour camp, machinery and material storage area located far away from the CRZ area.
viii.	Any temporary physical infrastructure set up during the construction period	<b>Noted and Agreed to Comply.</b>



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S. No.	Description	Status of Compliance / Remarks
	shall be removed simultaneously with the completion of laying of each segment of the project.	CMRL will ensure that all temporary physical infrastructure will be removed post work completion.
ix.	All the conditions stipulated by the Tamil Nadu Coastal Zone Management Authority for CRZ clearance vide its letter No. Letter No. RC No P1/2503/2021. Dated 19/01/2022, and commitments made by the PP before the CZMA and EAC shall be followed in letter and spirit.	<b>Noted and Agreed to Comply.</b> CMRL will comply with all the stipulation given by the CZMA and EAC.
x.	All necessary clearance from the concerned authority, as may be applicable should be obtained prior to commencement of the project or activity.	<b>Noted and Being Complied.</b> All prerequisite approvals / clearances are being obtained from the relevant authorities before commencement of the project or activity.

**Part B – General Conditions**

S. No.	Description	Status of Compliance / Remarks
i.	Management of solid waste by the Solid Waste Management Rules, 2016 shall be strictly implemented.	<b>Noted and Agreed to Comply.</b> CMRL will ensure that the proper waste management systems are implemented to minimize the adverse impact on the environment.
ii.	'Consent to Establish' and / or 'Consent to Operate' shall be obtained from State Pollution Control Board under the provisions of the Air (Prevention and Control of Pollution) Act, 1981 and/or the Water (Prevention and Control of Pollution) Act, 1974, as may be applicable.	<b>Noted and Agreed to Comply.</b> 'Consent to Operate' - CTO was obtained from TNPCB vide consent order no 2205148916742 dated 07/12/2022 and 2205248916742 dated 07/12/2022 for operating the Batching Plants (RMC Plant) installed at the Non-CRZ areas.
iii.	Disposal of muck during the construction phase should not create any adverse effect on the neighboring communities and be disposed of taking the necessary precautions for general safety and health aspects of	<b>Noted and Being Complied.</b> CMRL ensures that the muck generated during construction phase will be disposed only in the approved sites without creating any adverse effect on the neighborhood communities.





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	people, only in approved sites with the approval of Competent Authority.	Permission obtained from Chengalpattu collector vide order no 10656/Mineral/2021 dated 07.12.2021 for dumping muck and other construction waste in the abandoned quarries.
iv.	All liquid waste arising from the proposed development will be disposed of as per the norms prescribed by the Central / State Pollution Control Board. There shall not be any disposal of untreated effluent into the sea / coastal water bodies. It shall be ensured that the wastewater generated is treated in the STP as committed by the project proponent. The treated wastewater shall be reused for landscaping, flushing and/or HVAC cooling purposed etc. within the development. The project proponent should also make alternate arrangements for situations arising fir to malfunctioning STP. There shall be regular monitoring of standard parameters of the effluent discharge from STP under intimation to the SPCB.	<b>Complied.</b> No disposal of liquid wastes done in the sea / coastal water bodies.  300 KLD wastewater treatment plant has been installed in the non CRZ area for treatment of wastewater generated from site and the same treated water being reused for construction activities, landscaping, flushing and dust suppression activities.
v.	Any hazardous waste generated during the construction phase, shall be disposed off as per the applicable rules and norms with the necessary approvals of the State Pollution Control Board.	<b>Noted and Agreed to Comply.</b> Hazardous Waste Authorization (HWA) was obtained from TNPCB authorization no 23HFD49615794 dated 04/02/2023 as per the Hazardous Waste Management Rules, 2016.
vi.	A copy of the clearance letter shall be uploaded on the website of the concerned State Coastal Management Authority/ State Pollution Control Board. The clearance letter shall also be displayed at the Regional Office,	TNPCB and TNCZMA is the concern authority for the same.



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S. No.	Description	Status of Compliance / Remarks
	District Industries Centre and Collector's Office for 30 days.	
vii.	A Six-monthly monitoring report shall need to be submitted by the project proponent to the concerned Regional Office of this Ministry regarding the implementation of stipulated conditions.	<b>Being complied.</b> This is the 2 <sup>nd</sup> compliance report, and it is also being sent to Regional Office, MoEF&CC and would be uploaded on <a href="https://chennaiemtrorail.org/compliance-reports/">https://chennaiemtrorail.org/compliance-reports/</a> CMRL Website periodically.
viii.	The Ministry of Environment, Forest & Climate Change or any other Competent Authority may stipulate any additional conditions or modify the existing ones, if necessary, in the interest of the environment and the same shall be complied with.	<b>Noted and agreed,</b> subjected to applicability and validity of condition, if any.
ix.	Full co-operation shall be extended to the officials from the Regional Office of MoEF&CC, during monitoring of the implementation of environmental safeguards stipulated. It shall be ensured that documents/data sought pertinent is made available to the monitoring team. A complete set of all the documents submitted to MoEF&CC shall be forwarded to the concerned Regional Office of MoEF&CC.	<b>Agreed to Comply.</b> Full support and coordination will be extended to the Officials from the Regional Office of MoEF&CC during the monitoring of the implementation of environmental safeguards.
x.	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.	<b>Agreed</b> and shall be complied if such event occurs.
xi.	The ministry reserves the right to add additional safeguard measures subsequently, if considered necessary, and to take action to ensure effective implementation of the suggested safeguard measures in a time-bound and satisfactory manner, including revoking the environmental clearance under the	<b>Noted and Agreed to Comply.</b>



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S. No.	Description	Status of Compliance / Remarks
	provisions of the Environmental (Protection) Act, 1986, for non-compliance.	
xii.	All other statutory clearances such as 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 proponent from the respective Competent Authorities.	<b>Being Complied.</b> All applicable statutory clearances are being obtained from the respective competent authorities.
xiii.	The project proponent should advertise in at least two local newspaper 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 (SPCB) may also be seen on the website of the Ministry of Environment, Forest and Climate Change at <a href="https://parivesh.nic.in/">https://parivesh.nic.in/</a> . The advertisement should be made within seven days from the date of receipt of Clearance letter and a copy of the same should be forwarded to the concerned Regional Office of this Ministry.	<b>Complied.</b> Grant of CRZ Clearance Letter has been advertised on 18.03.2023 in two local newspapers namely <ul style="list-style-type: none"> <li>• Dina Thanthi ((தினத்தந்தி) in Tamil language.</li> <li>• The Hindu in English language.</li> </ul> Copy of advertisement has been already submitted to MoEF&CC vide letter no. CMRL/CON/ES/907/2023 on 10.04.2023.
xiv.	A copy of the clearance letter shall be sent by the project proponent to the concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, for whom suggestions / representations, if any, were received while processing the proposal.	<b>Complied.</b> A copy of the CRZ Clearance letter marked to Greater Chennai Corporation vide letter no. CMRL/CON/ES/903/2023 on 16.03.2023. As on date, no suggestions and representation received from the said authority.



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S. No.	Description	Status of Compliance / Remarks
xv.	The proponent shall upload the status of compliance of the stipulated conditions, including the 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.	<b>Being complied.</b> Noted. Status of compliance of stipulated conditions have been uploaded on <a href="https://chennaiemr.org/">https://chennaiemr.org/</a> and are being updated periodically.
xvi.	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environmental (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the project proponent along the status of compliance of clearance conditions and shall also be sent to the Regional Office of the Ministry by e-mail.	<b>Agreed to Comply.</b> The environmental statement Form V for financial year 2023-24 ending 31 <sup>st</sup> March 2024 was submitted to TNPCB and to the Regional Office of the Ministry by e-mail.





## TEST REPORT

Accredited by NABL & NABET, Certified ISO 9001:2015 ISO 14001:2015 & ISO 45001: 2018

<b>Report No</b>	: PCEI/TR-AAQ-10560	<b>Report Date</b>	: 08.10.2024
<b>Discipline</b>	: Chemical	<b>Group</b>	: Atmospheric Pollution
<b>Issued to</b>	: <b>M/S Chennai Metro Rail Limited</b> No.327 Anna Salai, Nandanam, Chennai - 600035		
<b>Sampling Method</b>	: IS 5182 (Part 23) 2006 (RA 2017)		
<b>Sampled by</b>	: Laboratory		
<b>Sample Collected Date</b>	: 03.10.2024		
<b>Sample Description</b>	: Ambient Air	<b>Sample Reference No</b>	: PCEI/AAQ-060-10-24
<b>Qty of Sample Received</b>	: Filter Paper & 30ml	<b>Sample Received On</b>	: 04.10.2024
<b>Sample Condition</b>	: Fit for Analysis	<b>Test Commenced On</b>	: 04.10.2024
<b>Sampling Location</b>	: Greenways	<b>Test Completed On</b>	: 08.10.2024

### Weather Condition

Ambient Temperature	: 32.4°C
Relative Humidity	: 58%
Climate Condition	: Broken Clouds
Predominant Wind Direction	: W

S.No	Parameters	Units	Test Method	Results	NAAQ Standards for Industrial, Residential, Rural and Other Area (TWA for 24 Hrs)
1	Sulphur dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 Part 2/Sec 1: 2023	14.3	80
2	Oxides of Nitrogen (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 Part 6: RA 2017	24.9	80
3	Respirable Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	IS 5182 Part 23: RA 2022	59.5	100
4	Respirable Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	IS 5182 Part 24: 2019	30.7	60
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	IS 5182 Part 10: RA 2019	BDL(DL:1.14)	4**

**Note:** i) NAAQS - National Ambient Air Quality Standards Issued by CPCB (Central Pollution Control Board) in 2009  
ii) TWA - Time Weighted Average      iii) \*\* - TWA for 1 Hour      iv) \* - TWA for Annual  
BDL - Below Detection Limit ; DL - Detection Limit

#### INTERPRETATION:

In the above Ambient Air results are meets the NAAQS standards with respect to the parameters tested

..... End of Report .....  
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*Colm...*  
Verified By



*...*  
Authorised Signatory

Note: 1.The test results are only to the sample submitted for test. 2.Any Correction of the test report in full or part shall invalidate the report 3.Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4.Perishable samples will be discarded immediately after reporting. 5.Under no circumstances lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report



**TEST REPORT**

Accredited by NABL & NABET, Certified ISO 9001:2015 ISO 14001:2015 & ISO 45001: 2018

<b>Issued to</b>	M/S Chennai Metro Rail Limited No.327 Anna Salai, Nandanam, Chennai - 600035
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<b>Report No</b>	PCEI/TR-N-10565
<b>Report Date</b>	08.10.2024

<b>Sampling Location</b>	Greenways		
<b>Sample Description</b>	Noise Monitoring	<b>Category of Area</b>	Residential Area
<b>Sampling Method</b>	IS 9989 - 1981 (RA 2020)	<b>Sample Reference No</b>	PCEI/N-065-10-24
<b>Sampled by</b>	Laboratory	<b>Sampling Date</b>	03.10.2024 to 04.10.2024
<b>Equipment Installed</b>	1.5 m from Ground Level	<b>Sample Received On</b>	04.10.2024
<b>Group</b>	Atmospheric Pollution	<b>Test Commenced On</b>	04.10.2024
<b>Discipline</b>	Chemical	<b>Test Completed On</b>	08.10.2024

**REFERENCE EQUIPMENT DETAILS**

Equipment Name	Make/Model	Equipment ID	Calibration Date	Due Date
Sound Level Meter with Data Logger	Lutron/SL-4023SD	PCEI/Noise/03	02.05.2024	01.05.2025

Day Time		
Date	Time	Readings dB(A)
03.10.2024	09:00 - 10:00	51.7
03.10.2024	10:00 - 11:00	50.1
03.10.2024	11:00 - 12:00	51.4
03.10.2024	12:00 - 13:00	48.9
03.10.2024	13:00 - 14:00	51.1
03.10.2024	14:00 - 15:00	51.2
03.10.2024	15:00 - 16:00	51.7
03.10.2024	16:00 - 17:00	51.9
03.10.2024	17:00 - 18:00	51.4
03.10.2024	18:00 - 19:00	51.9
03.10.2024	19:00 - 20:00	50.2
03.10.2024	20:00 - 21:00	50.8
03.10.2024	21:00 - 22:00	51.9
04.10.2024	06:00 - 07:00	51.4
04.10.2024	07:00 - 08:00	49.2
04.10.2024	08:00 - 09:00	50.4

Night Time		
Date	Time	Readings dB(A)
03.10.2024	22:00 - 23:00	42.0
03.10.2024	23:00 - 00:00	41.5
04.10.2024	00:00 - 01:00	42.5
04.10.2024	01:00 - 02:00	41.7
04.10.2024	02:00 - 03:00	42.3
04.10.2024	03:00 - 04:00	40.6
04.10.2024	04:00 - 05:00	41.0
04.10.2024	05:00 - 06:00	40.5

Time	Min	Max	Leq	Limit
Day	48.9	51.9	51.0	55 dB(A)
Night	40.5	42.5	41.6	45 dB(A)

**Note:**

Limit as per THE NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000, Schedule Ambient Air Quality Standards in respect of Noise in Residential Area Daytime 55 dB(A) & Night Time 45 dB(A). 1. Day time shall mean from 6.00 a.m. to 10.00 p.m. 2. Night time shall mean from 10.00 p.m. to 6.00 a.m. The Noise level were monitored as per IS 9989-1981 and CPCB Protocol for Ambient Noise Level Monitoring, Jul 2015.

**INTERPRETATION:**

The above result shows that the noise level meets the NAAQ standard for Residential area noise levels.

\*\*\* End of Report \*\*\*

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*Signature*  
Verified By



*Signature*  
Authorised Signatory

Note: 1. The test results are only to the sample submitted for test. 2. Any Correction of the test report in full or part shall invalidate the report. 3. Sample will be retained for 15 days from the date of reporting except in case of regulatory samples or specifically instructed by client. 4. Perishable samples will be discarded immediately after reporting. 5. Under no circumstances lab accepts any liability or loss/damage caused by use or misuse of test report after invoicing or issued of test report