



## KARNATAKA MINING ENVIRONMENT RESTORATION CORPORATION

(Govt of Karnataka Undertaking)

kmerc2014@gmail.com

**Sub:** Administrative approval for "*Establishment of CAAQMS (1 No.), Mobile Van (2 Nos.) & Integrated Noise-level Monitoring Meters (5 Nos) in Chitradurga District*".

**Ref :**

- 1 9<sup>th</sup> Oversight Authority meeting Dated: 07.06.2023.
- 2 KMERC office letter No. KMERC/CEPMIZ/HO/FOREST/26/2022-23, Dated: 22.06.2023.
- 3 Member Secretary, KSPCB Letter No: ಕರಾಮಾನಿಮುಂ/AQMC/KMERC-DPR/2024/177, ದಿನಾಂಕ: 01.07.2024.
- 4 Principal Secretary, Environment Letter No. ಅಪ್ಜೀ 80 ಇಲಾಜಿ 2023, ದಿನಾಂಕ: 04.07.2024.
- 5 Member Secretary, KSPCB Letter No: ಕರಾಮಾನಿಮುಂ/AQMC/KMERC-DPR/2024/459, ದಿನಾಂಕ: 11.11.2024.
- 6 Principal Secretary, Environment Letter No. ಅಪ್ಜೀ 155 ಇಲಾಜಿ 2024, ದಿನಾಂಕ: 28.11.2024.
- 7 KMERC Project Appraisal Committee Meeting dated: 29.07.2024.
- 8 GO No: CI 215 MMM 2022 BENGALURU Dated: 13.03.2023

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### **Preamble:**

A Project for "*Establishment of CAAQMS (1 No.), Mobile Van (2 Nos.) & Integrated Noise-level Monitoring Meters (5 Nos) in Chitradurga District*" submitted by Karnataka State Pollution Control Board for Rs. 914.50 lakhs was approved by the Oversight Authority vide ref. (1) and the approval was communicated vide ref letter (2) to submit DPR as per the guidelines.

Member Secretary, Karnataka State Pollution Control Board, submitted DPR for an amount of Rs **912.47** Lakhs vide ref letter (3) above through Principal Secretary, Environment department vide ref letter (4) seeking Administrative Approval.

The DPR was reviewed by the Appraisal Committee in its meeting held on **29.07.2024**. Complying to the observations the department submitted revised DPR for Rs. 972.48 lakhs vide ref letter (5) above through Principal Secretary, Environment department vide ref letter (6). The details of the project are as under:

Name of the project	Cost approved by OA (Rs in Lakhs)	Cost Recommended by HOD ie (Rs in Lakhs)	Amount Recommended by Appraisal Committee of KMERC (Rs in Lakhs)	Additional Cost Requested by HOD (Rs in Lakhs) on compliance to observations	Total Amount of the Project (Rs in Lakhs)	Amount Approved (Rs in Lakhs)
<i>"Establishment of CAAQMS (1 No.), Mobile Van (2 Nos.) &amp; Integrated Noise-level Monitoring Meters (5 Nos) in Chitradurga District"</i>	914.50	912.47	912.47	60.01	972.48	<b>972.48</b>

Hence the order,

**ADMINISTRATIVE APPROVAL ORDER No:**  
**CEPMIZ/2024-25/01/KSPCB/C/ KMERC/01030, Dated: 27.01.2025**

As explained in the preamble, as per the power delegated in GO vide ref. (8), administrative approval for the project ***"Establishment of CAAQMS(1 No.), Mobile Van (2 Nos.) & Integrated Noise-level Monitoring Meters (5 Nos) in Chitradurga District"*** is hereby accorded **for Rs. 972.48 Lakhs (Rupees Nine Hundred and Seventy-Two lakhs and Forty-Eight Thousand only)** as under:

Sl. No.	Component	Amount (Rs. in Lakhs)
1	Installation of Continuous Ambient Air Quality Monitoring (CAAQM) Station (Including all taxes)	190.55
2	Establishment & Operation of Mobile Ambient Air Quality Monitoring Equipment (MAAQME) (Including all taxes)	614.42
3	Installation of Integrated Ambient Noise Monitoring Terminal (IANMT) (Including all taxes)	96.59

*Om 27.1.23*

4	DPR preparation charges (Including 18% GST)	1.89
5	Administrative Expenses (Including Concurrent and Monitoring Evaluation)	9.02
6	Manpower Cost - deploying drivers for mobile vans (Including all taxes)	48.42
7	Fuel charges for Mobile Vans (Including all taxes)	11.59
<b>Total Project Cost Rs.</b>		<b>972.48</b>

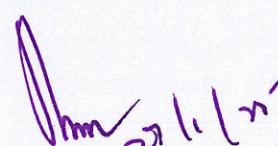
The Project shall be implemented by the Implementing Agency concerned strictly adhering to the following conditions:

1. The approved Project should be taken up as per the prevailing norms/rules of the Implementing Department and following the KTPP Act.
2. The Implementing Agency should ensure that the works approved by KMERC are not executed under any other Schemes/ Department including DMF Funds.
3. The Implementing Agency/executing agency shall prepare the list of the Villages/beneficiaries, who are to benefit from the projects and provide to KMERC & upload in the KMERC portal.
4. The concerned Administrative Department/ Implementing Agency shall not entrust the execution of the approved work(s) to another Administrative Department/ Implementing Government Agency without the prior permission of KMERC.
5. The projects (unless it is a beneficiary-oriented program) are to be taken up only on undisputed Govt. land/ community land with the prior approval of the revenue authority concerned to avoid any legal complications.
6. The concerned Administrative Department/ Implementing Agency shall be solely responsible for ensuring compliance with all related obligations/legal requirements including but not limited to Environmental/Forest Clearances, queries under RTI, Social Audits or any stakeholder consultations, as may be required for the implementation of works approved by KMERC.
7. The works shall be carried out as per the standard specification of items in the sanctioned estimate. Mandatory quality check(s) should be

Om 21.1.25

conducted by designated qualified staff at different levels, as per the approved norms of the concerned Administrative Department/ Implementing Agency/Executing Agency. Inspection & Quality control register shall invariably be maintained for each work of the project and the quantity of work shall also be duly checked and verified and should be made accessible to KMERC during Inspection and provide copies, whenever sought.

8. Prior approval from KMERC shall necessarily be taken for any change in the cost, scope or location of the project work approved.
9. The Administrative Department/ Implementing Agency concerned shall ensure post-project sustainability in terms of the Operations and Maintenance (O&M) aspects of the project works, as agreed during the submission of the proposal.
10. The implementation Agency shall take care of shifting all utilities before starting work and also make necessary provisions to avoid any damage to the structure in the future.
11. The implementing Agency shall ensure necessary soil investigation, hydraulic designs and structural design for the project and also make necessary provisions as per the requirements of the project.
12. A Board depicting Project details as specified in Project implementing guidelines should be erected at conspicuous places mentioning the details of the project/ year of execution/ project cost/ Executing Department & Agency/ date of commencement & completion/ Defect liability period etc., in both Kannada and English languages, as provided in the KMERC Website.
13. Wherever machinery & equipment are to be procured, the same will be done only after ensuring that proper arrangements are made for installation on site.
14. The funds earmarked and approved for the proposed category/categories/location(s) of works, must be utilized exclusively for the respective category/categories/location(s) of works only, and should not be diverted for other categories/location(s) of works.

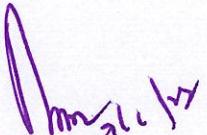


15. The Implementing Agency shall submit the details of the child account, IFSC Code, Bank names etc., for transfer of funds by KMERC. The implementing agency shall submit fund request component wise and funds will be released based on the monthly/milestone-based /physical progress and after fully utilizing previously released funds.
16. The Implementing Department/Agency shall be responsible for all payments made or recommended to be made on account of the project.
17. The implementing Agency shall be responsible for all statutory deductions/payments such as GST, Income Tax (IT), Labour Welfare Fund, Contractors' Benevolent fund, Royalty etc.
18. Separate accounts/cash books shall be maintained at the executing agency's level for the project. The books of Accounts of the Implementing Government Agency will be scrutinized periodically and should be made accessible to KMERC.
19. The implementing Agency shall implement the project within the approved project cost. Any savings in the project cost shall be intimated to KMERC and the implementing agency shall not utilize such saving amount for any other project or purpose without prior approval of KMERC.
20. The cost of DPR preparation will be reimbursed/provided, as per the actual requirement, which could be based on the guidelines/ norms of the kind of work by the department and arrived as per KTPP Act.
21. Utilization Certificates should be submitted with every fund request and a consolidated Utilisation Certificate shall be submitted after completion of the project.
22. The department concerned shall ensure the Internal Audit of the CEPMIZ Project expenditure annually and submit the report to the KMERC along with Action Taken Report on the observation of the Internal Auditors.
23. The implementing Agency shall submit and upload the Progress report of the project periodically (monthly/ quarterly/annually/project-end) on the KMERC portal & Digital copies of the same should be sent to KMERC

11/1/25

along with photos with geo-coordinates and small-sized videos at every stage of implementation.

24. The Department shall prepare a detailed statement of expenditure periodically (monthly/quarterly/annually) and submit to KMERC and upload the same in the KMERC portal.
25. On completion of the approved project, a consolidated report of the work done and assets created (if any) shall be submitted to KMERC. Details of the completed project should be incorporated in Google Earth and the duly verified Kmz/Kml file be sent to KMERC for the record.
26. Success stories of the implemented projects are to be prepared and provided to KMERC by the executing agencies after completion of the projects.
27. Mandatory Third-party concurrent monitoring and evaluation should be carried out and reports shall be submitted to KMERC. The expenditure towards this may be met as per actuals but within the approved administrative cost of 1% of the project cost towards CEPMIZ Project Implementation and Monitoring.
28. The department shall maintain an Asset register for all the assets created under the CEPMIZ Project.
29. The assets created under CEPMIZ funds shall not be disposed of, encumbered or utilized for the purpose other than for which funds have been provided by KMERC.
30. If the proposal involves land acquisition, the process of tendering shall be commenced only after securing the land.
31. In case the project involves procurement of machinery and equipment, the implementing agency should plan the procurement in such a way that supply of the same is synchronized with the completion of the building so that the same can be erected/commissioned without delay.

  
Managing Director

KMERC

**To,**

1. Additional Chief Secretary to Government, Forest, Ecology and Environment Department, Bengaluru.
2. Principal Secretary to Government (Ecology and Environment), Forest Ecology & Environment, Bengaluru.
3. Member Secretary, Karnataka State Pollution Control Board, M.G. Road, Bengaluru.
4. Deputy Commissioner, Chitradurga District
5. Chief Environment Officer, Central Environmental Laboratory, KSPCB, Bengaluru.
6. Chief Finance Officer, KMERC. Bengaluru.

**Copy for Kind Information,**

1. PS to Hon'ble Minister for Mines, Govt. of Karnataka, Bengaluru.
2. PS to Additional Chief Secretary to Government & Development Commissioner & Chairman, KMERC. Bengaluru.
3. PS to Secretary to the Govt. (MSME & Mines) of Karnataka, Bengaluru

## CHAPTER 2. PROJECT AT A GLANCE / SALIENT FEATURES / EXECUTIVE SUMMARY:

## Project at a Glance

Sector	Eco-Restoration	Sub-Sector	Pollution Control		Standalone project or in convergence	Standalone
Project name	Establishment of CAAQMS (1 no.), Mobile Van (2 nos.) & Integrated Noise-level Monitoring Meters (5 nos.) in Chitradurga district			Project type: New/ Upgradation / Strengthening/ Rejuvenation		New
Proposal submitted by	Air Quality Monitoring Cell (AQMC), Karnataka State Pollution Control Board	Govt. Implementing Agency		Karnataka State Pollution Control Board		
Project Location/ Coverage	CHITRADURGA DISTRICT	Total Project Cost (INR Cr.)		9.125	Project Duration (years)	7 years
Project Objectives	<ul style="list-style-type: none"> <li>❖ Improved monitoring system of air quality and noise level in the district</li> <li>❖ Improved environmental conditions for humans to reside</li> <li>❖ Improved health by maintaining ambience air &amp; noise quality within standards.</li> </ul>					

Project Outputs list						Project Outcomes list			
Sl. no	Major Project Outputs/Activities	Extent Ha./km/m <sup>3</sup> /Nos.)	Qty. / Nos.	Unit Cost* (in Rs.)	Total Cost (Lakh Rs.)	Sl. No.	Major Envisaged Outcomes	Key Performance Indicator (KPI) for measuring the Outcome	Assumptions/ Risks
	Installation of Continuous Ambient Air Quality Monitoring (CAAQM) Station				190.55				
1	Procurement and Installation at site	Nos.	1	148.20	148.20	1	Improved Ambient Air Monitoring Coverage	Measured by increase in frequency, node and parameters covered <b>Current Baseline:</b> <ul style="list-style-type: none"><li>• Mode : Manual</li><li>• # Parameters : 5</li><li>• Freq. : 104 days per year</li></ul>	
2	Post warranty 1 <sup>st</sup> year Comprehensive annual Maintenance (CMC)	Nos.	1	13.46	13.46	2	Improved Noise Pollution Monitoring Coverage	Measured by increase in frequency, mode and parameters covered <b>Current Baseline:</b> <ul style="list-style-type: none"><li>• Mode : Manual</li></ul>	Chitradurga is designated as a special event monitoring location i.e. noise level monitoring is done only on Deepawali evening
3	CMC - 2 <sup>nd</sup> year	Nos.	1	14.09	14.09				
4	CMC - 3 <sup>rd</sup> year	Nos.	1	14.80	14.80				

<b>Establishment &amp; operation of Mobile Ambient Air Quality Monitoring Equipment (MAAQME)</b>					<b>614.42</b>
1	Procurement and Installation at site	Nos.	2	238.80	477.60
2	Post warranty 1 <sup>st</sup> year Comprehensive annual Maintenance (CMC)	Nos.	2	33.21	66.42
3	CMC - 2 <sup>nd</sup> year	Nos.	2	35.20	70.40
<b>Installation of Integrated Ambient Noise Monitoring Terminal (IANMT)</b>					<b>96.59</b>
1	Procurement & installation of IANMT	Nos.	5	16.83	84.15
2	Civil work & KEB connection for IANMT (standalone)	Nos.	2	1.5000	3.00
3	Post-installation 1st year connectivity cost	Nos.	5	0.1888	0.94
4	Post-warranty Annual Recurring cost	Nos.	25	0.3400	8.50
<b>Administrative Activities</b>					<b>10.90</b>
1	DPR Preparation	No.	1	1.8880	1.89
2	Other Administrative Expense				9.02
<b>Total Project Cost (INR Lakhs)</b>					<b>912.47</b>

*\*All treatments will be tendered and awarded at a Fixed Price, including procurement, installation, warranty and maintenance*

		<ul style="list-style-type: none"> <li># Parameters : 1</li> <li>Freq.: 1 day per year (special event)</li> </ul>	
3	Improved Ambient Air Quality	<p>Measured by improvement in Annual Average value of AAQ parameters (8 Nos.) when compared to it s2023-24 average for Chitradurga District</p> <p><b>Current Baseline:</b></p> <ul style="list-style-type: none"> <li>PM10 : 50 µg/m<sup>3</sup> (60)</li> <li>PM2.5 : 18 µg/m<sup>3</sup> (40)</li> <li>SO<sub>2</sub> : 2 µg/m<sup>3</sup> (50)</li> <li>NO<sub>2</sub> : 6 µg/m<sup>3</sup> (40)</li> <li>NH<sub>3</sub> : 10 µg/m<sup>3</sup> (100)</li> <li>CO : ** mg/m<sup>3</sup> (02)</li> <li>O<sub>3</sub> : ** µg/m<sup>3</sup> (100)</li> <li>C<sub>6</sub>H<sub>6</sub> : ** µg/m<sup>3</sup> (05)</li> </ul> <p>(Permissible concentration as per NAAQS notification 18/11/2009 in brackets)</p> <p>** not monitored at present</p>	<p>Mining activity in the District has been low for some time now (only 3 working mine leases today compared to 24 MLs issued).</p> <p>And so the 2023-24 annual average values recorded in the District may not be comparable to a period when mining activity is in full swing</p>
4	Maintaining Noise Pollution levels within Permissible limits	<p>Measured by improvement in Annual Average value of Noise Pollution level</p> <p><b>Current Baseline:</b></p> <ul style="list-style-type: none"> <li>Day Time : 75 dB</li> <li>Night Time : 70 dB</li> </ul> <p><b>NOTE:</b> As monitoring has not been done, permissible limit for INDUSTRIAL ZONE is taken as the baseline</p>	<p>Chitradurga is designated as a special event monitoring location i.e. noise level monitoring is done only on Deepawali evening</p> <p>So, annual average value of noise level is not available (neither in normal circumstances nor when mining was at its peak).</p>
5	Maintaining CLASS OF WATER at current level	<p>Maintaining the Class of Water as measured in Chitradurga district under NWMP in the following locations</p> <p><b>Current Baseline:</b></p> <ul style="list-style-type: none"> <li>Vani Vilas Sagara (River): Level B</li> <li>Mattadakere (Tank): Level D</li> <li>Mallapura kere (Lake): Level D</li> </ul> <p>(Category mentioned in bracket)</p>	

**Project Expenditure schedule (Year - Wise)**

<b>Sl</b>	<b>Details</b>	<b>Project Cost (in Lakh Rs.)</b>							<b>Total Amount</b> (Lakh Rs.)
		2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	
1	Installation of Continuous Online Ambient Air Quality Monitoring (CAAQM) Station	148.20	-	13.46	14.09	14.80	-	-	190.55
2	Establishment & Operation of Mobile Ambient Air Quality Monitoring (MAAQM) Equipment	477.60	-	66.42	70.40	-	-	-	614.42
3	Installation of Integrated Ambient Noise Monitoring Terminal (IANMT)	87.15	0.94	1.70	1.70	1.70	1.70	1.70	96.59
4	Administrative Expenses	9.02	0.01	0.82	0.86	0.17	0.02	0.02	10.90
<b>TOTAL</b>		<b>721.97</b>	<b>0.95</b>	<b>82.40</b>	<b>87.05</b>	<b>16.67</b>	<b>1.72</b>	<b>1.72</b>	<b>912.47</b>

ಸಂ/ಕೆಂಜಾರ್ಸಿ/ CEPM12/2024-25/01 | KSPCB | C | KMER | 01030  
 ರೂಪಾಯ ಸಂಪೂರ್ಣ ಉದ್ದೇಶ ಲಾಭ ವಾಹಿನೆ ಇಂತರ್ವೆ ರಂಗಳಲ್ಲಿ ಮಾತ್ರ  
 (₹ 912.47 ಲಕ್ಷ) ಮಾತ್ರಗಳಿಗೆ  
 ಆಡಳಿತಾತ್ಮಕ ಮಂಜೂರು ನೀಡಲಾಗಿದೆ

ವ್ಯವಸ್ಥಾಪಕ ನಿರ್ದೇಶಕಾರ್ಯಾಲಯ  
 ಕೆಂಜಾರ್ಸಿ, ಬೆಂಗಳೂರು

ಭಾರತೀಯ ಪ್ರಾಣಾ ಬ್ಯಾ  
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Chief Environment Officer – 3

KSPCB, Bengaluru

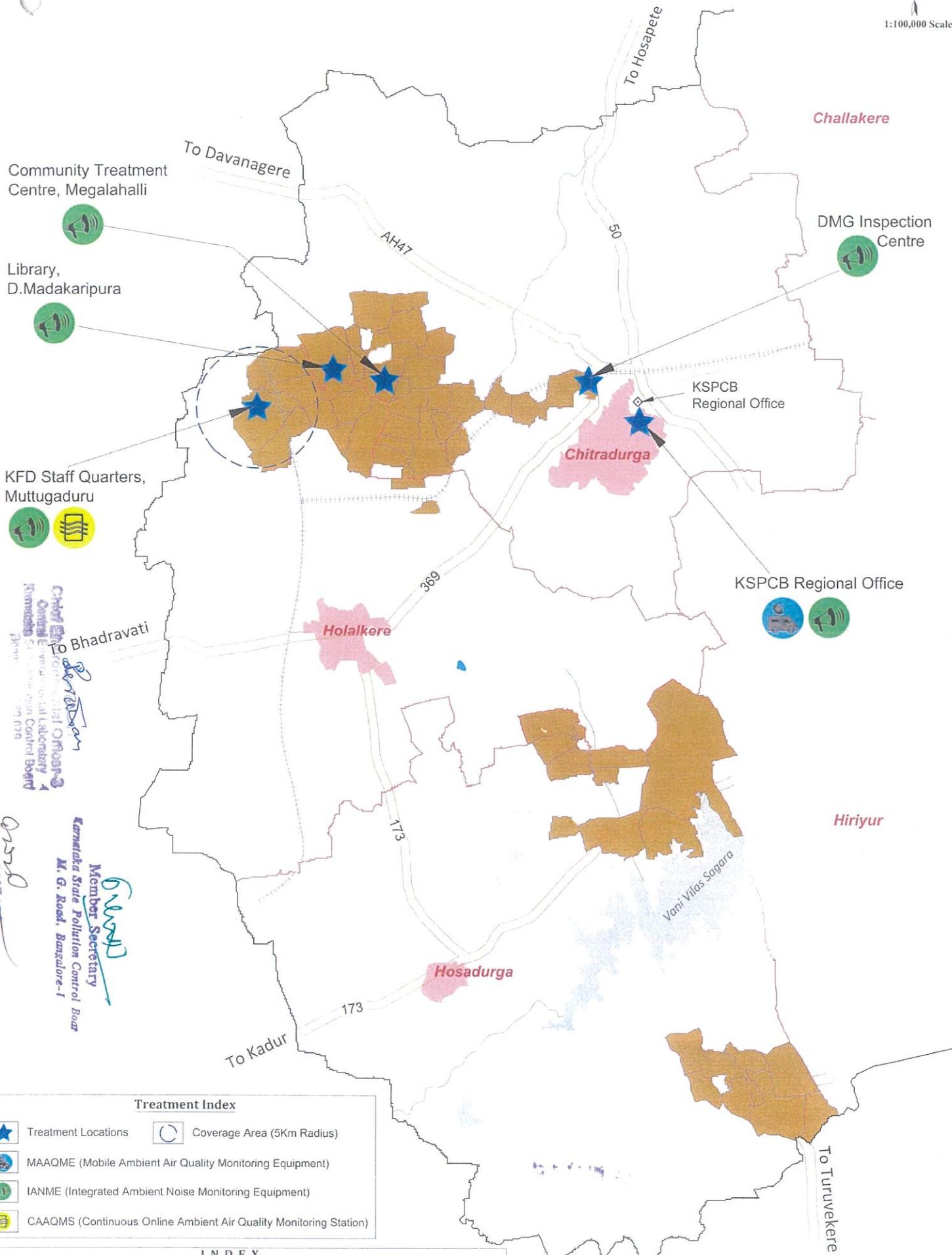
Member Secretary,

Karnataka State Pollution Control Board.

# CONSOLIDATED TREATMENT MAP

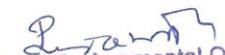
Establishment of CAAQMS, Mobile Van & Integrated Noise-level Monitoring Meters in Chitradurga district

N  
1:100,000 Scale



ESTABLISHMENT OF CAAQMS, MOBILE VANS INTEGRATED NOISE-LEVEL MONITORING METERS IN CHITRADURGA DISTRICT

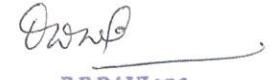
SR. No	Treatment / Activity	Unit	2024-25			2025-26			2026-27			2027-28			2028-29			2029-30			2030-31			TOTAL		
			Ph	Rate	Fin	Ph	Rate	Fin	Ph	Rate	Fin	Ph	Rate	Fin	Ph	Rate	Fin	Ph	Rate	Fin	Ph	Rate	Fin			
1	Installation of Continuous Ambient Air Quality Monitoring (CAAQMS) Station																									
(a)	Procurement and Installation at site	Nos.	1.0	148.20	148.20																				1.0	148.20
(b)	Post warranty Comprehensive annual Maintenance (CMC) 1st year	Nos.							1.0	13.46	13.46														1.0	13.46
(c)	CMC - 2nd year	Nos.								1.0	14.09	14.09													1.0	14.09
(d)	CMC - 3rd year	Nos.								1.0	14.80	14.80													1.0	14.80
	TOTAL			148.20					13.46		14.09		14.80												190.55	
2	Establishment & Operation of Mobile Ambient Air Quality Monitoring (MAAQMS) Equipment																									
(a)	Procurement and Installation at site	Nos.	2.0	235.6000	477.60																				2.0	477.60
(b)	Post warranty Comprehensive annual Maintenance (CMC) 1st year	Nos.							2.0	66.42	66.42														2.0	66.42
(c)	CMC - 2nd year	Nos.								2.0	70.40	70.40													2.0	70.40
	TOTAL			477.60					66.42		70.40														614.42	
3	Procurement & Operation of Integrated Ambient Noise Monitoring Terminal																									
(a)	Procurement & installation of IANMT	Nos.	5.0	16.9300	84.15																				5.0	84.15
(b)	Civil work & KEB connection for IANMT (standalone)	Nos.	2.0	1.5000	3.00																				2.0	3.00
(c)	Post-installation 1st year connectivity cost	Nos.			5.0	0.1300	0.94																		5.0	0.94
(d)	Post-warranty Annual Recurring cost	Nos.							5.0	0.3400	1.70	5.0	0.3400	1.70	5.0	0.3400	1.70	5.0	0.3400	1.70	5.0	0.3400	1.70	25.0	8.50	
	TOTAL			87.15		0.94			1.70		1.70		1.70		1.70		1.70		1.70		1.70		1.70		96.59	
4	Administrative Expenses																									
(a)	DPR Preparation	Nos.	1.0	1.6800	1.89																				1.0	1.89
(b)	Other administrative expenses (incl. of 3rd party Evaluation)	Rs.			7.13			0.01		0.82		0.86		0.17		0.02		0.02		0.02		0.02		0.02	9.02	
	TOTAL			9.02		0.01			0.82		0.86		0.17		0.02		0.02		0.02		0.02		0.02		10.90	
<b>TOTAL - PROJECT COST</b>			<b>721.97</b>		<b>0.95</b>			<b>82.40</b>		<b>87.05</b>		<b>16.67</b>		<b>1.72</b>		<b>1.72</b>		<b>1.72</b>		<b>1.72</b>		<b>912.47</b>				

  
**Chief Environmental Officer-3**  
 Central Environmental Laboratory  
 Karnataka State Pollution Control Board  
 Bengaluru - 560 079

  
**Managing Director**  
**Karnataka Mining Environment**  
**Restoration Corporation**

  
**Member Secretary**  
**Karnataka State Pollution Control Board**  
**M. G. Road, Bangalore-1**

YEAR WISE COST ESTIMATION FOR THE PROJECT

  
**B.P. RAVI IPS**,  
 Principal Secretary to Government  
 (Ecology and Environment)  
 Forest, Ecology and Environment Department

## CHAPTER 6. PROJECT OUTPUTS: ACTIVITIES & QUANTITIES

### Installation of Continuous Online Ambient Air Quality Monitoring (CAAQM) Station

Particulars of the work	Extent (Nos.)	Remarks
Procurement & Installation of CAAQM Station	1	Scope includes procurement, installation & commissioning of CAAQMS. This will cover sensors, analysers, data loggers, power supply including backups and station construction & furnishing.
CMC - 1st year	1	
CMC - 2ndt year	1	
CMC - 3rd year	1	
CMC - 4th year	-	Comprehensive annual maintenance of the station including manning the operation, calibration of sensors/analysers, carrying out maintenance of equipment & office as required and security of the premises along with equipment
CMC - 5th year	-	

Table 20. Expected outputs from Installation of CAAQM Station

### Establishment & Operation of Mobile Ambient Air Quality Monitoring (MAAQM) Equipment

Particulars of the work	Extent (Nos.)	Remarks
Procurement & Installation of MAAQME	2	Scope includes procurement, installation & commissioning of MAAQME. Same as above except it involves procurement of vehicle and setting up the equipment on it instead of a physical station
CMC - 1st year	2	
CMC - 2ndt year	2	
CMC - 3rd year	-	
CMC - 4th year	-	Comprehensive annual maintenance of the station including manning the operation, calibration of sensors/analysers, carrying out maintenance of equipment & vehicle as required and security of the vehicle along with equipment
CMC - 5th year	-	

Table 21. Expected outputs from Establishment & operation of MAAQM Equipment

### Installation of Integrated Ambient Noise Monitoring Terminal (IANMT)

Particulars of the work	Extent (Nos.)	Remarks
Procurement & installation of IANMT	5	Scope includes procurement, installation & commissioning of IANMT.
Civil work & KEB connection for IANMT (standalone)	2	Civil work is covered under CAAQMS when NMT is co-located with it (3 sites)
Post-installation 1st year connectivity cost	5	Charges payable for GSM, GPRS, and fixed IP connection plans for Server
Post-warranty Annual Recurring cost	25	License renewal + connectivity costs

Table 22. Expected outputs from Procurement of IANME Equipment

## CHAPTER 7. GENERAL ABSTRACT OF COST (AOC)

SI	Details	Project Cost (in Lakh Rs.)							Total Amount (Lakh Rs.)
		2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	
1	Installation of Continuous Online Ambient Air Quality Monitoring (CAAQM) Station	148.20	-	13.46	14.09	14.80	-	-	190.55
2	Establishment & Operation of Mobile Ambient Air Quality Monitoring (MAAQM) Equipment	477.60	-	66.42	70.40	-	-	-	614.42
3	Installation of Integrated Ambient Noise Monitoring Terminal (IANMT)	87.15	0.94	1.70	1.70	1.70	1.70	1.70	96.59
4	Administrative Expenses	9.02	0.01	0.82	0.86	0.17	0.02	0.02	10.90
<b>TOTAL</b>		<b>721.97</b>	<b>0.95</b>	<b>82.40</b>	<b>87.05</b>	<b>16.67</b>	<b>1.72</b>	<b>1.72</b>	<b>912.47</b>

Table 23. General Abstract of Cost for establishment of Pollution Control monitoring in Chitradurga

AMS - Continuous Ambient Air Quality Monitoring Station, VAN - Mobile Van for Ambient Air Quality Monitoring, NMS - Noise Monitoring Station, ADMIN - Administrative Expenses

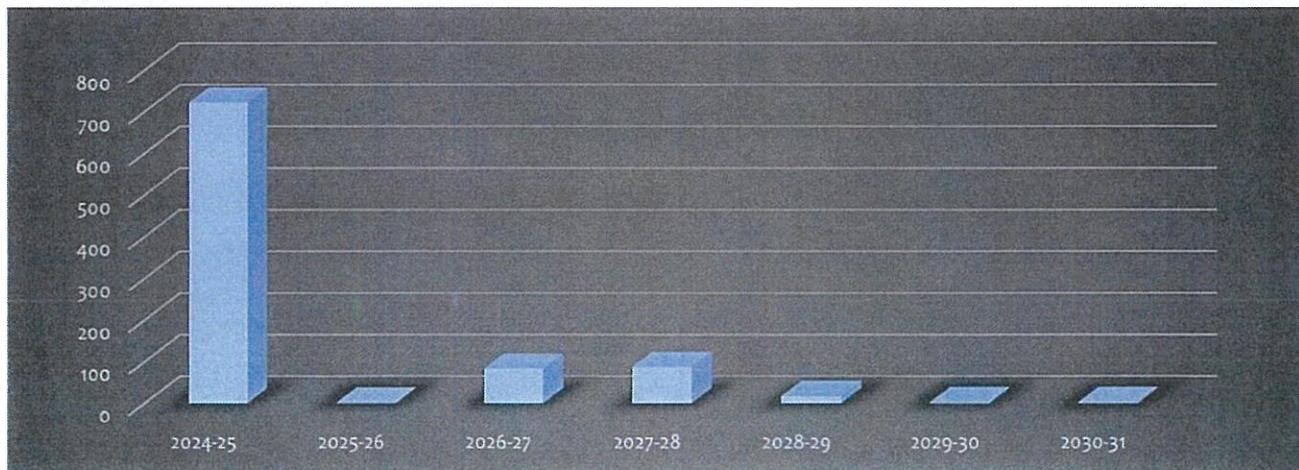
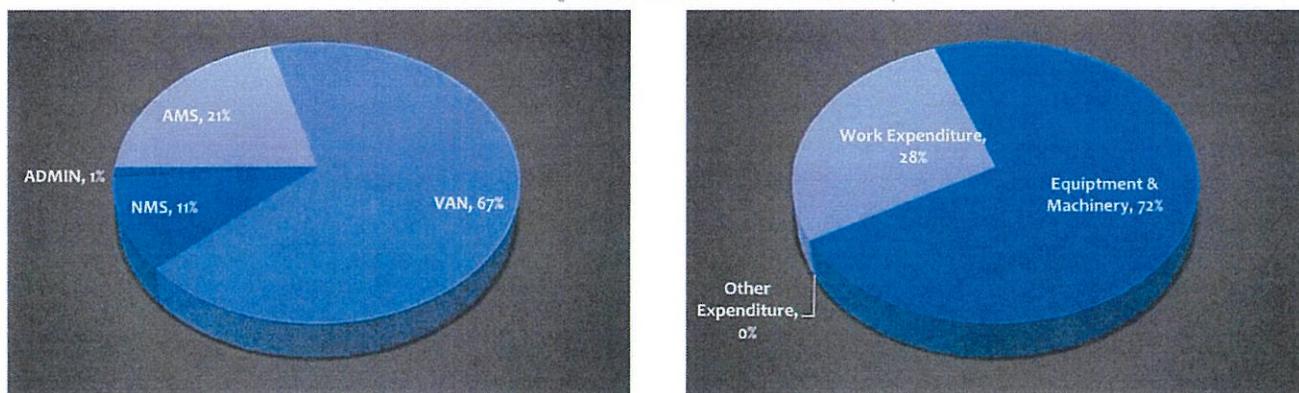


Image 19. Component wise & Annual Spend analysis

The cost estimate being submitted at this DPR stage is in line with the approved project budget.

## CHAPTER 11.

## PROJECT IMPLEMENTATION CALENDAR:

### Installation of Continuous Online Ambient Air Quality Monitoring (CAAQMS) Station

#	Particulars of the work	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL
1	Procurement & Installation at site	1	-	-	-	-	-	-	1
2	CMC - 1 <sup>st</sup> year	-	-	1	-	-	-	-	1
3	CMC - 2 <sup>nd</sup> year	-	-	-	1	-	-	-	1
4	CMC - 3 <sup>rd</sup> year	-	-	-	-	1	-	-	1
5	CMC - 4 <sup>th</sup> year	-	-	-	-	-	-	-	-
6	CMC - 5 <sup>th</sup> year	-	-	-	-	-	-	-	-

Table 33. Implementation Calendar for Installation of CAAQMS

### Establishment & Operation of Mobile Ambient Air Quality Monitoring (MAAQMS) Equipment

#	Particulars of the work	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL
1	Procurement & Installation of MAAQMS	2	-	-	-	-	-	-	2
2	CMC - 1 <sup>st</sup> year	-	-	2	-	-	-	-	2
3	CMC - 2 <sup>nd</sup> year	-	-	-	2	-	-	-	2
4	CMC - 3 <sup>rd</sup> year	-	-	-	-	-	-	-	-
5	CMC - 4 <sup>th</sup> year	-	-	-	-	-	-	-	-
6	CMC - 5 <sup>th</sup> year	-	-	-	-	-	-	-	-

Table 34. Implementation Calendar for Establishment & Operation of MAAQMS

### Installation of Integrated Ambient Noise Monitoring Terminal (IANMT)

#	Particulars of the work	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL
1	Procurement & installation of IANMT	5	-	-	-	-	-	-	5
2	Civil work & KEB connection for IANMT (standalone)	2	-	-	-	-	-	-	2
3	Post-installation 1st year connectivity cost	-	5	-	-	-	-	-	5
4	Post-warranty Annual Recurring cost	-	-	5	5	5	5	5	25

Table 35. Implementation Calendar for Procurement of IANMT

## CHAPTER 12. EXPENDITURE SCHEDULE

Sl	Details	Project Cost (in Lakh Rs.)							Total Amount (Lakh Rs.)
		2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	
1	Installation of Continuous Online Ambient Air Quality Monitoring (CAAQM) Station	148.20	-	13.46	14.09	14.80	-	-	190.55
2	Establishment & Operation of Mobile Ambient Air Quality Monitoring (MAAQM) Equipment	477.60	-	66.42	70.40	-	-	-	614.42
3	Installation of Integrated Ambient Noise Monitoring Terminal (IANMT)	87.15	0.94	1.70	1.70	1.70	1.70	1.70	96.59
4	Administrative Expenses	9.02	0.01	0.82	0.86	0.17	0.02	0.02	10.90
<b>TOTAL</b>		<b>721.97</b>	<b>0.95</b>	<b>82.40</b>	<b>87.05</b>	<b>16.67</b>	<b>1.72</b>	<b>1.72</b>	<b>912.47</b>

Table 36. Expense Schedule for the Project

### Installation of Continuous Online Ambient Air Quality Monitoring (CAAQM) Station

#	Particulars of the work	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL (Lakh Rs.)
1	Procurement & Installation of CAAQM Station	148.20	-	-	-	-	-	-	148.20
2	CMC - 1 <sup>st</sup> year	-	-	13.46	-	-	-	-	13.46
3	CMC - 2 <sup>nd</sup> year	-	-	-	14.09	-	-	-	14.09
4	CMC - 3 <sup>rd</sup> year	-	-	-	-	14.80	-	-	14.80
5	CMC - 4 <sup>th</sup> year	-	-	-	-	-	-	-	-
6	CMC - 5 <sup>th</sup> year	-	-	-	-	-	-	-	-
<b>TOTAL</b>		<b>148.20</b>	<b>-</b>	<b>13.46</b>	<b>14.09</b>	<b>14.80</b>	<b>-</b>	<b>-</b>	<b>190.55</b>

Table 37. Expense Schedule for CAAQMS installation and operation

## Establishment & Operation of Mobile Ambient Air Quality Monitoring (MAAQME) Equipment

#	Particulars of the work	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL (Lakh Rs.)
1	Procurement & Installation of MAAQME	477.60	-	-	-	-	-	-	477.60
2	CMC - 1 <sup>st</sup> year	-	-	66.42	-	-	-	-	66.42
3	CMC - 2 <sup>nd</sup> year	-	-	-	70.40	-	-	-	70.40
4	CMC - 3 <sup>rd</sup> year	-	-	-	-	-	-	-	-
5	CMC - 4 <sup>th</sup> year	-	-	-	-	-	-	-	-
6	CMC - 5 <sup>th</sup> year	-	-	-	-	-	-	-	-
TOTAL		477.60	-	66.42	70.40	-	-	-	614.42

Table 38. Expense Schedule for MAAQME establishment and operation

## Installation of Integrated Ambient Noise Monitoring Terminal (IANMT)

#	Particulars of the work	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL (Lakh Rs.)
1	Procurement & installation of IANMT	84.15	-	-	-	-	-	-	84.15
2	Civil work & KEB connection for IANMT (standalone)	3.00	-	-	-	-	-	-	3.00
3	Post-installation 1st year connectivity cost	-	0.94	-	-	-	-	-	0.94
4	Post-warranty Annual Recurring cost	-	-	1.70	1.70	1.70	1.70	1.70	8.50
TOTAL		87.15	0.94	1.70	1.70	1.70	1.70	1.70	96.59

Table 39. Expense Schedule for IANMT installation

## Administrative Expenses

#	Particulars of the work	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL (Lakh Rs.)
1	DPR preparation	1.89	-	-	-	-	-	-	1.89
2	Other Administrative Expenses	7.13	0.01	0.82	0.86	0.17	0.02	0.02	9.02
TOTAL		9.02	0.01	0.82	0.86	0.17	0.02	0.02	10.90

Table 40. Expense Schedule for Administrative Expenses

## CHAPTER 3. COSTING FOR MOBILE VAN ROUTE COVERAGE

### COSTING SUMMARY

Sl	Details	Project Cost (in Lakh Rs.)							Total Amount (Lakh Rs.)
		2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	
1	Total No. Drivers required	-	2	2	2	2	2	2	
	Manpower Cost – deploying drives for Mobile vans	-	6.44	7.01	7.65	8.33	9.08	9.90	48.42
2	Total Fuel Requirement (No. of Litres)	-	1,425	1,425	1,875	1,875	1,875	1,875	
	Fuelling Cost	-	1.36	1.44	2.01	2.13	2.26	2.39	11.59
	<b>TOTAL</b>	-	<b>7.80</b>	<b>8.46</b>	<b>9.66</b>	<b>10.46</b>	<b>11.34</b>	<b>12.30</b>	<b>60.01</b>

### MANPOWER COSTS

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL
TOTAL No. DRIVER Required for the Year	-	2	2	2	2	2	2	12 Nos.
Annual Cost per Driver (in Rs. Lakhs)	2.952	3.218	3.507	3.823	4.167	4.542	4.951	n/a
<b>TOTAL (in Rs. Lakhs)</b>	-	<b>6.44</b>	<b>7.01</b>	<b>7.65</b>	<b>8.33</b>	<b>9.08</b>	<b>9.90</b>	<b>48.42</b>

#### Estimated Cost of engaging Heavy Vehicle Driver (1 Nos.) in Year 2024-25

Monthly Salary of Driver (Heavy Vehicle)	Rs. 20,241.00
Service Contract charges (3%)	Rs. 607.23
Sub-Total (Monthly cost)	Rs. 20,848.23
GST Applicable (@18%)	Rs. 3,752.70
<b>ANNUAL COST OF ENGAGING DRIVER</b>	<b>Rs. 2,95,212.00</b>

### FUELING COST

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL
Fuel Required (# Litres)	-	1,425	1,425	1,875	1,875	1,875	1,875	10,350
Fuel Rate (Rs. per Lite) with 6% inflation	90.00	95.40	101.12	107.19	113.62	120.44	127.67	n/a
<b>TOTAL (Rs. Lakhs)</b>	-	<b>1.36</b>	<b>1.44</b>	<b>2.01</b>	<b>2.13</b>	<b>2.26</b>	<b>2.39</b>	<b>11.59</b>

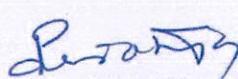
### Fuel Requirement for vehicle movement

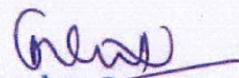
Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL (kms / Litres)
Vehicle Utilization Plan *	0%	70%	70%	100%	100%	100%	100%	n/a
Distance to be covered annually (in kms)	-	4,200	4,200	6,000	6,000	6,000	6,000	32,400
Fuel Required (liters) @ 4kms per litre	-	1,050	1,050	1,500	1,500	1,500	1,500	8,100

\* Annual distance to cover Route Plan @ 100% Utilization : 6,000 kms

### Fuel Requirement for running Monitoring (power outage / no electrical connection)

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	TOTAL (Nos. / Litres)
Monitoring Locations	-	5	5	5	5	5	5	n/a
Annual Monitoring count	-	60	60	60	60	60	60	360 Nos.
Count of Monitoring run on Fuel (@ 25%)	-	15	15	15	15	15	15	90 Nos.
Fuel Required @ 25 litres / per monitoring	-	375	375	375	375	375	375	2,250

  
Dr. P. Niranjana  
Chief Environmental Officer-3

  
Member Secretary  
Karnataka State Pollution Control Board  
M. G. Road Bangalore

ಸರ್ವರದ ಪ್ರಥಮ ಕಾರ್ಯದರ್ಶಿ  
( ಪಂಗರ ಮತ್ತು ಚೆವಿಪಂಕ್ತಿ )  
ಅರ್ಥ: ಪಂಗರ ಮತ್ತು ಚೆವಿಪಂಕ್ತಿ ಇಲಾಖೆ

ನಂ/ದಾತಾರ್ಥ/ CEPM12/2024-25/01/KSPCB/C/KMERC/01030

ದಾತಾರ್ಥ... ಬೆಳವು ಉತ್ತರ ಮತ್ತು ಅಳೆ ಕ್ರಾನ್ ಎಂಬೆ  
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