

**BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL SOUTHERN
ZONE AT CHENNAI**

ORIGINAL APPLICATION NO.74 OF 2023

In the matter of:

Padma Kumar, Kerala

APPLICANT

VS

**The State of Kerala, Through its Secretary
& ORS**

RESPONDENTS

INDEX TO TYPEDSET OF DOCUMENTS

| S.NO | DATE | PARTICULARS | PG NO. |
|-------------|-------------|---|---------------|
| 1. | 14.08.2024 | Status Report filed by the 6 th Respondent | 1 |

Dated at Chennai this 15th day of August 2024.



Counsel for 6th Respondent

**BEFORE THE HONOURABLE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI**

Original Application No 74 of 2023

In the Matter of:

Padma Kumar, Kerala

:

Applicant

Vs.

The State of Kerala,
Through its Chief Secretary
and others

:

Respondents

**STATUS REPORT FILED BY THE KERALA MINERALS AND
METALS LIMITED**

I, Jaison Thomas, aged 50 years, S/o V.L. Thomas, residing at Jojes, Vadakkumthala P.O, Karunagappally, Kollam, Kerala-691536, do hereby solemnly affirm and state as follows:

1. I am the Company Secretary & Head Legal of the 6th respondent, the Kerala Minerals and Metals Limited. I am conversant with the facts of the case and I am authorized and competent to swear to this affidavit on behalf of the Kerala Minerals and Metals Limited.
2. The present affidavit is filed, to bring to the notice of this Honourable Court, the progress with respect to the measures to be undertaken by the 6th respondent.
3. The actions taken by the 6th respondent is as tabulated below:

| Sl No | Item | Status/History | Target | Remarks |
|-------|--|---|---|---|
| 1 | <u>Long Term Measures</u> Acid Regeneration Plant (ARP) technology modification to generate saleable iron oxide. | <ul style="list-style-type: none"> • KMML floated tender in July - 19 & it was retendered due to single bid. • KMML invited tender in September 2019 and only one party quoted.viz. M/s INDROX Global | 18 months from the date of acceptance of LOI | Kick off meeting held on 13.08.2024. Project deliverables are discussed in the meeting. |



Jaison Thomas

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Company Secretary & Head Legal
The Kerala Minerals and Metals Ltd.
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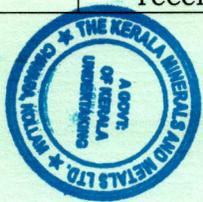
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| | | <p>Pvt.Ltd. NewDelhi.</p> <ul style="list-style-type: none"> • After evaluation of the proposal, the file was put up to 243rd Board Meeting of the company held on 21.05.2020, for approval. • As approved by the Board, the file was put upto Government on 01.06.2020 for getting final sanction to place order. • As per the direction given by Government of Kerala retendering done in June 2021. • Global retender was invited on 10.06.2021.The bidders were M/S Indrox Global Pvt. Ltd andM/S Samrox. • The offer submitted was evaluated and noted that the only acceptable offer is from M/S Indrox Global Pvt. Ltd and approved in the 250th Board Meeting of the Company held on 15.01.2022. The file was submitted for final Government approval. • Subsequently a meeting was convened under the chairmanship of Hon'ble Minister for Industries, Law & Coir on 09.06.2022 and in the meeting, it was decided to work out the cost reasonableness & submit report to Government of Kerala. • Accordingly, FEDO, Kochi had done the Cost analysis study and the report got submitted to Government for approval to place order. • The Government has accorded | | |
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| | | <p>administrative approval for the project on 26.05.2024.</p> <ul style="list-style-type: none"> • LOI has been placed on the party dated. 04.06.2024. | | |
| II | Short Term Measures | | | |
| a | <u>Construction of garland drain around the IOP/ ETP ponds</u> | <ul style="list-style-type: none"> • Completed garland drain construction around new ETP. • Completed garland drain construction around old ETP/ IOP. | Completed. | |
| b | <u>Remediation of affected land near KMML premises.</u> | <ul style="list-style-type: none"> • Reengaged M/s FEDO, Kochi for Project Management for the trial test patch in the allegedly contaminated land in KMML premises. • Three parties quoted for the E-tender. • E-tender evaluation completed & work order issued to M/s P T Jayapal. • Execution of the work started by the first week of April 2024 and installation completed. • First set of remediation trial runs with lime solution are progressing at site under the supervision of PMC M/s. FEDO, Kochi. • Status of the work & procedure following got informed to KSPCB | Target completion is August 2024. | Operations ongoing at site for the test patch. Water plus lime solution sprinklings operations completed and now leachate collection is progressing at site. Results to be inferred subsequently on completion of pumping out leachate. |
| c | <u>Solid Waste Management (In-situ/ ex-situ storage)</u> | <ul style="list-style-type: none"> • Tendering done for Geotube iron oxide containment from new elevated iron oxide pond. In principle approval was given by KSPCB. • Evaluation of the received offers were | 10 months from the date of placement of order. | |



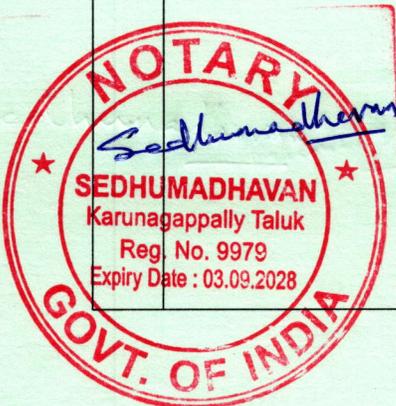
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| | <p>ii. Disposal of Iron oxide/ ETP sludge</p> <p><u>Iron oxide residue sales</u></p> | <p>completed. Awaiting approval/authorization from CPCB/KSPCB for the trial.</p> <ul style="list-style-type: none"> The new technology of Geotubes involves dewatering and storage of iron oxide using Geotubes from the elevated new iron oxide pond. Letter TP/TS/ENV dated 18.03.2024 forwarded to The Principal Secretary to Government of Kerala (Industries), seeking support to KMML by intervening with CPCB in getting approval/authorization for the proposed Geotubes installation. Letter dtd 11.07.2024 has been sent to CPCB for an appointment to discuss the matter of approval. Awaiting their reply. <ul style="list-style-type: none"> KMML invited E-tender for the sales of iron oxide residue on 19.12.2019. Sales order was issued to M/s Miracle Sands and Chemicals, Tuticorin for 10000 MT on 09.06.2020. The matter has been taken up by the party for concurrence from CPCB & resume proceedings are going on at their end for approval. Awaiting authorization from | <p>Tentatively 6-8 months from CPCB approval</p> | <p>Awaiting approval from CPCB, New Delhi</p> <p>Awaiting authorization from CPCB, New Delhi</p> |
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| <p>iii. <u>ETP sludge sales</u></p> | <p>CPCB for trial production of Iron Oxide bricks by M/s Miracle Sands and Chemicals.</p> <ul style="list-style-type: none"> Letter dtd 11.07.2024 has been sent to CPCB for an appointment to discuss the matter of approval. Awaiting their reply After e-tendering, Sales order was issued to M/s Miracle Sands and Chemicals, Tuticorin for 50000 MT of ETP sludge. KSPCB granted authorization to M/s Miracle Sands and Chemicals for collection and transportation of ETP sludge, which valid up to 31.03.2025. M/s Miracle Sands and Chemicals have completed the shifting of approx. 24101.57 MT of ETP sludge as on 13.08.2024. | <p>Work in progress</p> | <p>Ongoing activity.</p> |
| <p>iv. Value addition of by products</p> | <ul style="list-style-type: none"> In order to select potential agencies to carry out value addition of iron oxide & ETP sludge on a DBFOO basis with suitable technology, KMML published a global Expression of Interest. Offers received from parties and CSIR-NIIST, Thiruvananthapuram was appointed as consultant to carry out the technical evaluation of the proposal. E- Tender finalized the proposal. M/s | <p>18 months from the placement of order.</p> | <p>The proposal is under final Government Approval. Public enterprises board meeting is over in this regard. We are expecting final approval shortly.</p> |



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| | | Tetrabic India Private Limited, Hyderabad, is the party identified and the proposal is under final Government approval. | | |
| v. | In house value addition of iron oxide | <ul style="list-style-type: none"> ▪ KMML has developed an in-house technique for value addition of iron oxide by converting it to Iron Sinters (Sponge iron) (50 MT in feed) ▪ Third trial with modified process methodology is started. The results to be achieved for further fine tuning if required else technology documentation is the next phase. Results of the trial are getting tested now. ▪ Technology freezing/DPR Preparation - 6 months ▪ Statutory Clearance - 6 months ▪ Tendering activities - 6 months ▪ Plant installation- 18 months ▪ Plant Trial run - 6 months | 42 months from the placement of order. | |
| vi. | Iron oxide brick making plant | <ul style="list-style-type: none"> • As part of NH-66 widening work, about 8 lakhs quantity of bricks are required for KMML boundary wall construction. • E-tender invited (2023_KMML_586898_ 1 dt. 12.07.2023), for the set up of Iron Oxide brick manufacturing as done in the earlier days of KMML. • Work order (TP/WO/PTS/0354/2023-2024 dt. 26.12.2023 was | 6 months. | Started trial operation of the plant |



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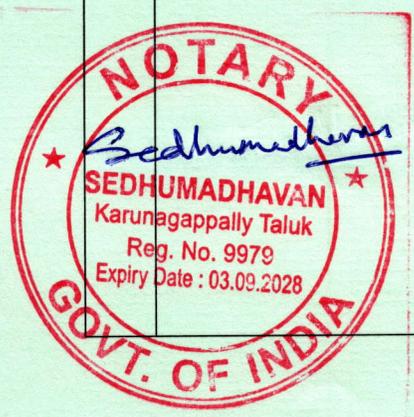
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| | | <p>issued to M/s C Ashokan for the production of 8,00,000 nos of iron oxide brick for the in-home use of KMML.</p> <ul style="list-style-type: none"> • The plant building construction completed & Equipments installed. • Intimation letter already forwarded to KSPCB vide letter (TP/TS/ENV dt. 01.02.2024) for iron oxide brick manufacturing in KMML. | | |
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Disposal of Online generated Iron oxide to CTSDF to Kochi

1. It is also decided that the iron oxide which is further generated from the acid regeneration plant would get disposed of to CTSDF, Kochi (M/s. Kerala Enviro infrastructure Limited).
2. An agreement dated 02.08.2024 has been entered between KMML and KEIL for the disposal of iron Oxide for a period of two years which are going to generate from ARP.
3. In the above context, approved action plan of KSPCB dated 19.07.2024 has been followed.

Status of action taken and implementation of the recommendations of Joint committee

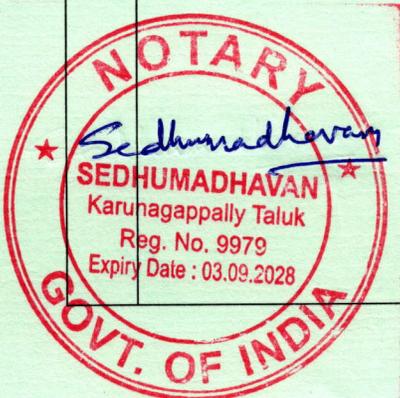
| | Findings of the Joint committee | Status, Target and remarks |
|---|---|--|
| 1 | The remedial measures both short term and long term already proposed by M/s KMML shall be implemented within the committed time limit. | Time lined status of short term and long-term measures mentioned items covered in the previous pages. |
| 2 | The existing effluent treatment system shall be upgraded to ensure compliance to the effluent discharge norms prescribed under the consent conditions - within one year | <p><u>New Tertiary Tank in U 200-Addition to improve the existing effluent treatment system.</u></p> <p><u>Civil work</u></p> <ul style="list-style-type: none"> ▪ Work order was issued to M/s. Sivani associates on 25.03.2024, for the construction of foundation and works has been completed. <p><u>Mechanical work</u></p> <ul style="list-style-type: none"> ▪ Tank fabrication & erection work completed and rubber lining work tendering in progress. |



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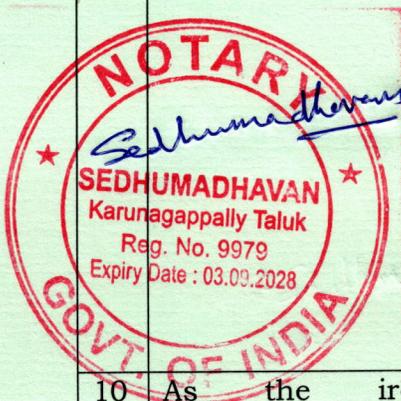
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| | | <ul style="list-style-type: none"> ▪ Purchase order issued for agitator assembly. ▪ Expected time of completion - December 2024 <p><u>ETP revamping/ Modernization</u></p> <ul style="list-style-type: none"> ▪ Work order issued on M/s SBA Enviro system, Delhi for DPR preparation. ▪ The final DPR submitted by the party for the construction of 6 MLD Effluent Treatment plant got submitted to KSPCB on 26.06.2024 for Technical concurrence ▪ Tentative time of Completion- December 2026. |
| 3 | Integrated consent to operate issued to KMML by KSPCB shall be amended suitably with the necessary effluent discharge norms and hazardous waste management according to The Environment (Protection) Rules 1986 within a month. | <p>Complied.</p> <ul style="list-style-type: none"> ▪ A pH and flow meter already installed locally at the outlet of discharge pump and pH is displayed in the ETP MCC room. ▪ The pH details are daily recorded by KMML. |
| 4 | Place proper sign boards should be placed at all suitable places to avoid human/ animal contact with the polluted stagnant water bodies in the vicinity of the human habitation - within a month. | <p>Sign board installed at site on 28.10.2023.</p> <p>Complied</p> |
| 5 | Permanent capping of existing storage ponds or temporary capping using LDPE liners and also suitable chemical dosage to neutralize runoff before next monsoon or by May 2023. | <p>Complied.</p> <ul style="list-style-type: none"> ▪ Almost fifty percentage a of the old ponds area are capped. ▪ Temporary capping of old iron oxide pond II for an area of 6300 M2 using LDPE sheet completed on 03.02.2024. ▪ Work Order issued to M/s Ashokan dt.07.05.2024 for temporary capping of settling pond 1 for an area of 6200 m2. ▪ Collection pit of garland around old IOP/ETP is provided with lime solution dosing. <p>Time of completion -Oct 2024.</p> |



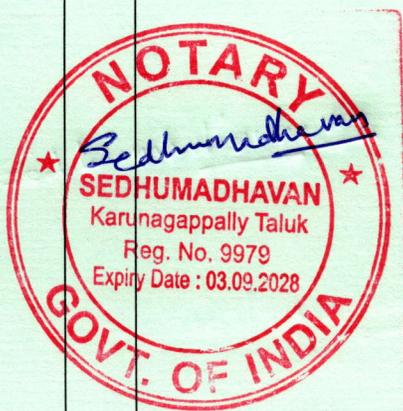
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| 6 | Not to discharge untreated effluent into any drain or natural drain. Construct Garland drain all along the industry premises within 9 months and along the periphery of old iron oxide ponds by March 2023. Also the runoff should be neutralized if required and ensured if required suitable and proper treatment before its discharge. | <p>Complied</p> <p><u>Storm water cleaning</u></p> <ul style="list-style-type: none"> ▪ Cleaning of the storm water drains being done periodically. <p><u>Storm Water Drain Neutralization</u></p> <ul style="list-style-type: none"> ▪ The storm water drain is neutralizing continuously using lime solution at a point near the railway gate exit. |
| 7 | Among the process changes, feasibility of inclusion of waste water option for recovery of acid and neutralization of iron oxide sludge using suitable chemicals prior to the disposal of iron oxide sludge into storage tank within 3 months. | <p>Complied.</p> <ul style="list-style-type: none"> ▪ KMML already have the feasibility of recycling wash water and reusing in plant itself to the possible extent. ▪ The iron oxide slurry is neutralized at source before pumping to the new pond. The iron oxide is deposited in the new IOP and clear liquor is recycled to the slurry preparation tank. ▪ New ETP plant project would bring more amount of water recycling. |
| 8 | Lime treatment in existing dump yards and surface water contaminated areas- ongoing. | <p>Complied.</p> <ul style="list-style-type: none"> ▪ Lime treatment in the existing dump yards as temporary measures being done continuously. ▪ In addition, lime spreading have done prior to capping of old ponds. |
| 9 | Regular water supply and periodical health camp- ongoing. | <p>Complied.</p> <ul style="list-style-type: none"> ▪ KMML is continuously supplying about 7 to 8 lakhs liters per day of drinking water of potable quality to the surrounding local residences. ▪ Potable water is getting supplied through pipeline around 65 kms for local residence and also through tankers. ▪ Conducting regular medical camps once in a month and providing medicines, medical aid to ailing patients/ palliative care. |
| 10 | As the iron oxide pond capacity exhausted, take immediate action for temporary storage and safe | <p>Complied.</p> <ul style="list-style-type: none"> ▪ As the storage space in Iron oxide pond has exhausted, temporary |



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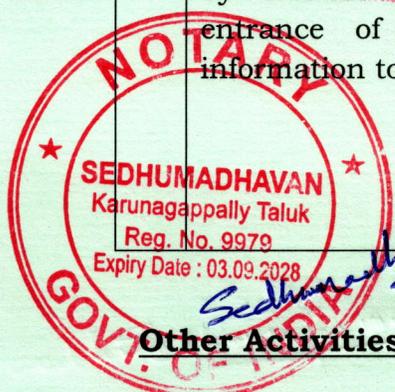
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| | <p>disposal with immediate effect.</p> | <p>storage area for safe disposal of iron oxide is done in accordance with the Hazardous and Other Waste (Management and transboundary Movement) Rules. KSPCB approved action plan dated 19.07.2024 in this regard is followed.</p> <ul style="list-style-type: none"> ▪ <u>Iron Oxide Brick Making</u> <p>Work order dated. 26/12/23 was issued to M/s C Ashokan for iron oxide brick making plant and for making 8 lakh nos of bricks for in- home use of KMML.</p> <p>The plant building and construction completed. Brick making machine Equipments/ installation work are also completed.</p> <p>The period of completion is 180 days. Trials started.</p> <ul style="list-style-type: none"> ▪ The value addition of iron oxide with the support of M/s Tetrabic Private Limited, iron oxide brick production, production of iron oxide sinters, etc. will utilize a portion of iron oxide generated/store in the premises in secured ponds. |
| <p>11</p> | <p>Utilization of iron oxide sludge for recovery of iron within 3 months and also explore the option of red oxide from iron oxide sludge within 3 months.</p> | <p><u>In-house Value addition of Iron oxide</u></p> <ul style="list-style-type: none"> • Since there is no readily available technology for producing iron sinter from KMML iron oxide sludge, KMML has developed an in-house technique for value addition of iron oxide by converting it to iron sinters (sponge iron). • However, KMML have to further develop and fine tune a technology for iron sinter commercialization. Trials are ongoing. <p>Time of completion - 42 months.</p> <ul style="list-style-type: none"> • Apart, other actions of value addition like DBFOO plant, dispatch to M/s Miracle Sands & Chemicals are in approval stage. |
| <p>12</p> | <p>Detailed assessment of affected areas and implement remedial measures in contaminated site as well as ground</p> | <ul style="list-style-type: none"> ▪ Based on CSIR – NEERI, Nagpur study report, KMML started remediation of contaminated sites on |



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| | water, and feasibility of acquisition of affected land | <p>trial basis. This will be replicated based on the results.</p> <ul style="list-style-type: none"> Feasibility of acquisition of attested land is under the consideration of Government. |
| 13 | <p>M/s. KMML also ensure compliance to CPCB directions issued under section 5 of the environment sound management of Hazardous and Other waste (management and Trans boundary Movements) Rules, 2016 as amended.</p> <p>KMML submit Action taken report to CPCB directions issued under section 5 of the environment sound management of Hazardous and Other waste (management and Trans boundary Movements) Rules, 2016 as amended.</p> | <p>Complied.</p> <ul style="list-style-type: none"> Action taken report is being submitted to CPCB Chairman once in two months. Latest Bi-monthly report submitted on 10.06.2024. |
| 14 | All tube wells located within the industry premises shall be connected with tamper proof flow meter to record total water consumption of natural resources within 3 months and submit report to KSPCB on quarterly basis. | <p>Complied.</p> <ul style="list-style-type: none"> Monthly water consumption report is being submitted to KSPCB. Quarterly report of total water consumption submitted to KSPCB on 20.07.2024. |
| 15 | Install OCEMS (Online continuous effluent monitoring system) and a flow meter at effluent outlet discharge into sea to assess compliance to the effluent discharge norms prescribed by KSPCB and displayed at the entrance of the industry for the information to Public within 5 months. | <p>A pH and flow meter already installed locally at the outlet of discharge pump and pH is displayed in the ETP MCC room. The pH details are daily recorded by water treatment plant of KMML.</p> <ul style="list-style-type: none"> E-tendering done for OCEMS on 15.04.2024. LOI placed on the party dated 15.07.2024. Time frame set for completion - (September) 2024 |



Other Activities

As part of Corporate Social Responsibility (CSR), the company is also extending the following supports to the general public.

- Conducting regular medical camps.
- Providing medical aid to ailing patients/ palliative care.
- Support to nearby Panchayaths for providing street lights, drains, stray dog catching etc.



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- Covid Second Line Treatment Centre (CSLTC) – We have setup a CSLTC at GHSS, Sankaramangalam School. This facility was a 850 Nos bedded one with oxygen support from KMML and the same was maintained for more than a year time. Rs. 4.5 Crores expended and as part of COVID support.
- Supplied liquid medical oxygen at reduced rate for pandemic treatment.
- Providing support for the infrastructure upliftment of nearby schools.
- Tailing sand supply to nearby surroundings for low lying land filling.
- Supporting welfare activities of mining area.
- Dividend payment to Government of Kerala.
- We are continuously supplying about 7 to 8 lakhs liters per day of drinking water of potable quality to the surrounding local residences.
- Potable water is supplied through pipe line around 65 kms for local residence and also in tankers.
- KMML is paying 50% of water tax of the Jalanidhi scheme for local residences.

The above report is submitted for the kind consideration of this Honourable Court.

Dated this the 14th day of August, 2024



JAISON THOMAS
Company Secretary & Head Legal
The Kerala Minerals and Metals Ltd.
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[Signature]
Deponent

VERIFICATION

I, Jaison Thomas, aged 50 years, S/o V.L. Thomas, residing at Jojes, Vadakkumthala P.O, Karunagappally, Kollam, Kerala-691536, do hereby submit that the contents of the tables above are true to the best of my knowledge and belief derived from the relevant files and records. I have not suppressed any material facts.

Date: 14/08/2024

Place: Kollam



JAISON THOMAS
Company Secretary & Head Legal
The Kerala Minerals and Metals Ltd.
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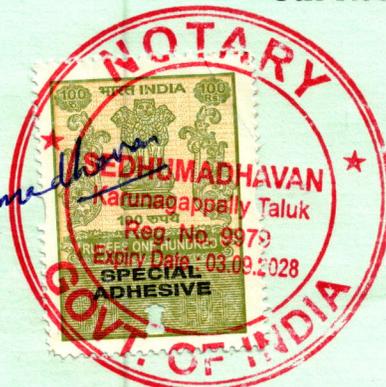
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6th Respondent

Solemnly affirmed and signed before me
by the deponent on this the 14th day of
August 2024
in my office at Chavara, Karunagappally.

SEDHUMADHAVAN M.A., LL.M
ADVOCATE & NOTARY
KARUNAGAPPALLY
KERALA, INDIA

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...Applicant

Vs

State of Kerala Through its Cheif Secretary
& Ors

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TYPED SET OF DOCUMENTS

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COUNSEL FOR 6th Respondent

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