

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, SOUTHERN
ZONE AT CHENNAI

O.A. No. 74 of 2023

Padma Kumar, Kerela

...PETITIONER

Vs

The State of Kerela & Ors

...RESPONDENTS

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Dated at Chennai this 22nd Day of July 2024.



COUNSEL FOR RESPONDENT 6

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

Original Application No 74 of 2023

In the Matter of:

Padma Kumar, Kerala

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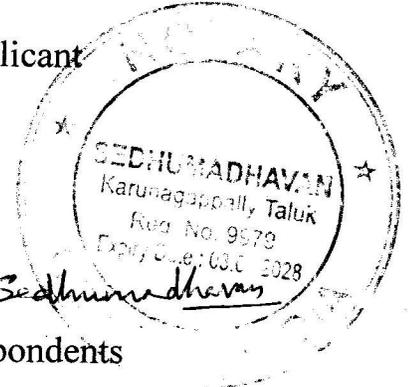
Applicant

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 49 years, S/o V.L. Thomas, residing at Jojes, Vadakkumthala P.O, Karunagappally, Kollam, Kerala-691536, the Company Secretary & Head Legal, Kerala Minerals and Metals Limited, Chavara, Kollam, Kerala, 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	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 re-tender in September 2019 and only one party quoted.viz. M/s INDROX Global Pvt.Ltd. New Delhi. 	18 months from the date of acceptance of LOI	

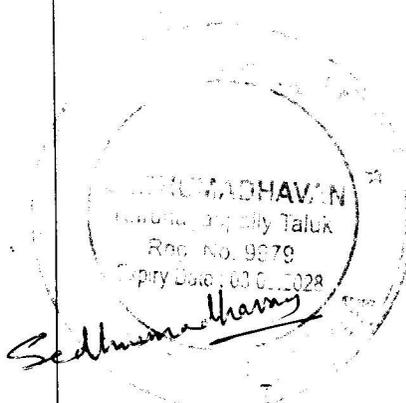


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The Kerala Minerals and Metals Ltd.
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<p>modification to generate saleable iron oxide.</p>	<ul style="list-style-type: none"> • KMML invited re-tender in September 2019 and only one party quoted.viz. M/s INDROX Global Pvt.Ltd. New Delhi. • 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 up to 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 and M/S Samrox. • The offer submitted was evaluated by engaging CSIR-NIIST, Thiruvananthapuram and noted that the only acceptable offer is from M/S Indrox Global Pvt. Ltd and the same is 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 	
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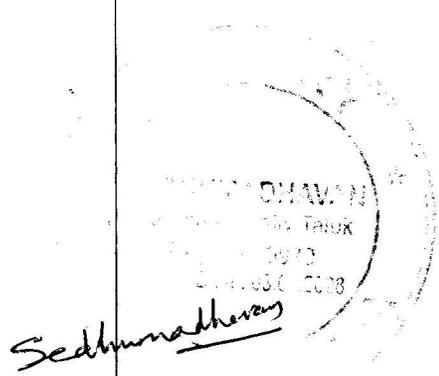


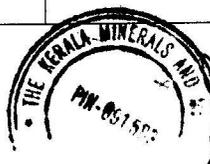
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		<p>reasonableness & submit report to Government of Kerala.</p> <ul style="list-style-type: none"> • Accordingly FEDO, Kochi had done the Cost analysis study and the report got submitted to Government for approval to place order. • The Government has accorded administrative approval for the project on 26.05.2024. • Letter of Intent (LOI) has been placed on the party dated. 04.06.2024. 		
	<p>I <u>Short Term Measures</u></p> <p>a <u>Construction of garland drain around the IOP/ ETP ponds</u></p>	<ul style="list-style-type: none"> • Completed garland drain construction around new ETP. • Completed garland drain construction around old ETP/ IOP. 	Completed.	
	<p>b <u>Remediation of affected land near KMML premises.</u></p>	<ul style="list-style-type: none"> • Re engaged M/s FEDO, Kochi for Project Management for the trial test patch in the allegedly contaminated land inside 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 is progressing. 	Target date for completion of first set of trial appraisal is 15th July 2024.	



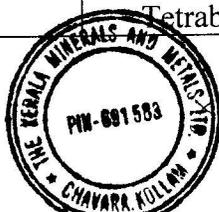
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<p>c <u>Solid Waste Management</u> (In-situ/ ex-situ storage)</p> <p>i. Geotube as a trial implementation.</p>	<ul style="list-style-type: none"> • Tendering done for Geotube iron oxide containment from new elevated iron oxide pond. • Evaluation of the received offers were completed. Awaiting approval/authorization from CPCB/KSPCB for the trial. • 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. 	<p>10 months from placement of order.</p>	<p>Awaiting approval from CPCB, New Delhi</p> 
<p>ii. Disposal of Iron oxide/ ETP sludge</p> <p><u>Iron oxide residue sales</u></p>	<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 & regular proceedings are going on at their end for approval. 	<p>Tentatively 6-8 months from CPCB approval</p>	<p>Awaiting authorization from CPCB, New Delhi</p>



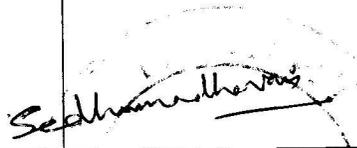
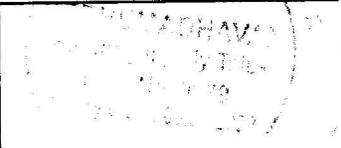
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The Kerala Minerals and Metals Ltd.
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		<ul style="list-style-type: none"> • Awaiting authorization from CPCB for trial production of Iron Oxide bricks by M/s Miracle Sands and Chemicals. 		<p><i>Sedhuvath</i></p> <p>SEETHA MADHAVAN Narane Jappolly Taluk P.O. No. 1970 Kollam, Kerala</p>
	iii. <u>ETP sludge sales</u>	<ul style="list-style-type: none"> • 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 21507.352 MT of ETP sludge as on 26.06.2024. 	Work in progress	Ongoing
	iv. Value addition of by products	<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 offer finalized for the proposal. M/s Tetrabic India 	18 months from the placement of order.	The proposal is under final Government Approval.



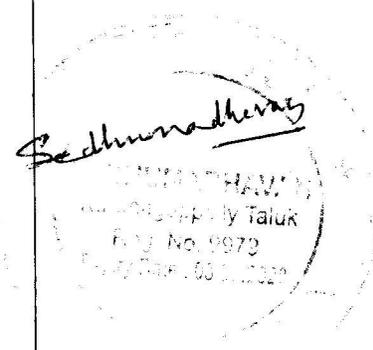
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		Private Limited, Hyderabad, is the party identified and the proposal is under final Government approval.		
v.	In house value addition of iron oxide	<ul style="list-style-type: none"> ▪ KMML has developed an in-house technique for value addition of iron oxide by converting it to Iron Sinters (Sponge iron) ▪ 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 ▪ 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 issued to M/s C Ashokan for the 	6 months	




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		<p>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 being 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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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 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 work completed and rubber lining work tendering in progress. ▪ Purchase order issued for agitator assembly. ▪ Expected time of completion - October 2024



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		<p><u>ETP revamping/ Modernization</u></p> <ul style="list-style-type: none"> ▪ Work order issued M/s SBA Enviro system, Delhi for DPR preparation. ▪ The final DPR submitted by the party for construction of 6 MLD Effluent Treatment plant got submitted to KSPCB on 26.06.2024 for Technical concurrence ▪ Tentative time of Completion - December 2026. <p style="text-align: right;"><i>Sadhu Medhavan</i></p>
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 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. <p>Time of completion – Sept 2024.</p>
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	<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>

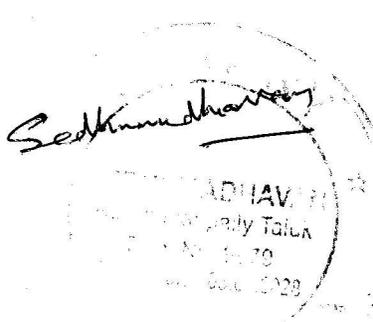


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	required suitable and proper treatment before its discharge.	<ul style="list-style-type: none"> The storm water drain is neutralizing continuously using lime solution at a point near the railway gate exit. <p><i>Sedhuna Shereef</i></p>
7	Among the 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.
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 pipe line 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 disposal with immediate effect.	<p>Complied.</p> <ul style="list-style-type: none"> As the storage space in Iron oxide pond has exhausted, temporary storage area for safe disposal of iron oxide is done in accordance with the Hazardous and Other Waste (Management and transboundary Movement) Rules.

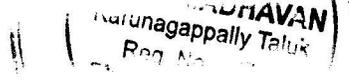


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		<ul style="list-style-type: none"> ▪ <u>Iron Oxide Brick Making</u> Work order dated. 26/12/23 was issued to M/s C Ashokan for iron oxide brick making plant and for making 8 lakh nos of bricks for in- home use of KMML. The plant building and construction completed. Brick making machine Equipments installation work are in final stage of completion. The period of completion is 180 days. ▪ 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.
11	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><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. <p>Time of completion - 42 months.</p>
12	Detailed assessment of affected areas and implement remedial measures in contaminated site as well as ground water, and feasibility of acquisition of affected land	<ul style="list-style-type: none"> ▪ Based on CSIR – NEERI, Nagpur study report KMML started remediation of contaminated sites on trial basis. ▪ Feasibility of acquisition of attested land is under the consideration of Government..
13	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>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.



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	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.	 
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 04.03.2024.
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. Approval in progress for placing work order. Time frame set for completion - (September) 2024

Other Activities

As part of Corporate Social Responsibility (CSR), the company is also extending the following support 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.
- 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.



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- 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 a pipe line around 65 kms for local residents and also in tankers.
- KMML is paying 50% of water tax of the Jalanidhi scheme for local residences.

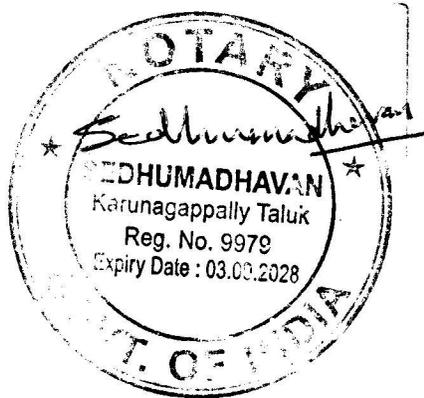
The above report is submitted for the kind consideration of this Honourable Court.

Dated this the st day of July, 2024



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



VERIFICATION

I, Jaison Thomas, aged 49 years, S/o V.L. Thomas, residing at Jojes, Vadakkumthala P.O, Karunagappally, Kollam, Kerala-691536, the Company Secretary and Head Legal, Kerala Minerals and Metals Limited, Chavara, Kollam, Kerala, 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: 01/07/2024

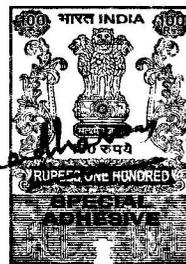
Place: Kollam



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6th Respondent

Solemnly affirmed and signed before me
by the deponent on this the.....day of
.....*Tuesday*.....20*24*.....
in my office at Chavara, Karunagappally.



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

NOTARIAL REGISTER
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TRIBUNAL AT CHENNAI

(Southern Zone)

O.A. NO. 74 of 2023

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... Petitioner

Vs

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STATUS REPORT FILED BY
RESPONDENT 6

B. DEEPAK NARAYANAN

COUNSEL FOR RESPONDENTS 6

(For Kerala Minerals and Metal Limited)

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