

ANNEXURE

Tvl. MURUGAPPA BLUE METALS ROUGH STONE AND GRAVEL CLUSTER QUARRY

Sirumailour Village,
Uthiramerur Taluk,
Kancheepuram District

EXTENT =1.39.81 ha

ToR obtained

Lr No. SEIAA-TN/F.No.9806/ToR- 1456/2023 Dated: 10.05.2023

Project Proponent

Tvl. Murugappa Blue Metals,
Partner Thiru.R. Sivakumar,
S/o.Ramalingam,
No.3, Bhagavatsingh Nagar,
Thirutheri,Singaperumal Koil,
Chengalpattu Taluk & District.Pin:603 204

LIST OF ANNEXURES

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**THIRU.DEEPAK S. BILGI, I.F.S.
MEMBER SECRETARY**

**STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY-TAMILNADU**
3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet,
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Phone No. 044-24359973
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TERMS OF REFERENCE (ToR)

Lr No. SEIAA-TN/E.No.9806/ToR- 1456/2023 Dated: 10.05.2023.

To

M/s. Murugappa Blue Metal
Thiru R Sivakumar, S/o Ramalingam
No. 3, Bhagavatsingh Nagar,
Thirutheri,
Singaperumalkoil,
Chengalpattu District

Sir / Madam,

Sub: SEIAA, Tamil Nadu - Terms of Reference with public Hearing (ToR) for the proposed Rough Stone and Gravel quarry over an extent of 1.39.81 Ha in S.F.No. 15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P) & 7 of Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu by Tvl. Murugappa Blue Metal- under project category - "B1" and Schedule S.No.1 (a) - ToR issued along with Public Hearing - preparation of EIA report - Regarding.

- Ref:**
1. Online proposal No.SIA/TN/MIN/416882/2023, dated: 03.02.2023.
 2. Your application submitted for Terms of Reference dated: 08.02.2023.
 3. Minutes of the 366th SEAC meeting held on 30.03.2023.
 4. Minutes of the 613th SEIAA meeting held on 21.04.2023.
 5. Proponent reply dated: 08.05.2023.
 6. Minutes of the 616th SEIAA meeting held on 10.05.2023.


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Kindly refer to your proposal submitted to the State Level Impact Assessment Authority for Terms of Reference.

The proponent, Tvl. Murugappa Blue Metal has submitted application for Terms of Reference (ToR), for the proposed Rough Stone and Gravel quarry over an extent of 1.39.81 Ha in S.F.No. 15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P) & 7 of Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu.

SEAC Remarks: -

The proposal was placed in the 366th Meeting of SEAC held on 30.03.2023. The project proponent gave detailed presentation. The details of the project furnished by the proponent are available in the website (parivesh.nic.in).

The SEAC noted the following:

1. The project proponent, Tvl. Murugappa Blue Metal has applied for Terms of Reference for the proposed Rough Stone and Gravel quarry over an extent of 1.39.81 Ha in S.F.No. 15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P) & 7 of Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu
2. The project/activity is covered under Category "B1" of Item 1(a) "Mining of Mineral Projects" of the Schedule to the EIA Notification, 2006.
3. As per mining plan, the lease period is 10 years. The mining plan is for 5 years & production should not exceed 1,09,276 cu.m of Rough Stone for first five years and 11,500 m³ for remaining five years and 19,332 cu.m of Gravel for three years. The annual peak production 22,714 cu.m of Rough Stone & 8,084 cu.m of Gravel. The maximum depth of mining would be 35m BGL (2m Gravel + 33m Rough Stone).

Based on the presentation made by the proponent SEAC recommended grant of Terms of Reference (TOR) with Public Hearing, subject to the following TORs, in addition to the standard terms of reference for EIA study for non-coal mining projects and details issued by the MOEF & CC to be included in EIA/EMP Report:

1. The proponent is requested to submit the valid registered lease document during the EIA appraisal after the previous lease granted for the mining operations is legally surrendered


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- (or) lapsed with the consent of the competent authority.
2. The proponent is requested to carry out a survey and enumerate on the structures located within 100m, 200m, 300m from the boundary of the mine lease area with details of occupants/residents.
 3. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.
 4. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Necessary data and documentation in this regard may be provided.
 5. The proponent shall submit the details regarding the nature of blasting activity which will be carried out.
 6. The PP shall furnish DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., upto a radius of 25 km from the proposed site.
 7. The PP shall provide individual notice regarding the Public Hearing to the nearby house owners located in the vicinity of the project site.
 8. In the case of proposed lease in an existing (or old) quarry where the benches are non-existent (or) partially formed critical of the bench geometry approved in the Mining Plan, the Project Proponent (PP) shall prepare and submit an 'Action Plan' for carrying out the realignment of the 'highwall' benches to ensure slope stability in the proposed quarry lease which shall be vetted by the concerned Asst. Director of Geology and Mining, during the time of appraisal for obtaining the EC.
 9. The Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry indicating the proposed stabilizing measures during the appraisal while obtaining the EC, as the depth of the proposed working is extended beyond 30 m below ground level.
 10. **If the blasting operation is to be carried out, the PP shall present a conceptual design for carrying out the NONEL initiation based controlled blasting operation involving**


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line drilling & muffle blasting and Simulation Model indicating the anticipated Blast-induced Ground Vibration levels in the proposed quarry as stipulated by the DGMS Circular No.7 of 1997, during the EIA Proposal.

11. Details of Green belt & fencing shall be included in the EIA Report.
12. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.
13. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,
 - a) What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
 - b) Quantity of minerals mined out.
 - c) Highest production achieved in any one year
 - d) Detail of approved depth of mining.
 - e) Actual depth of the mining achieved earlier.
 - f) Name of the person already mined in that leases area.
 - g) If EC and CTO already obtained, the copy of the same shall be submitted.
 - h) Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
14. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
15. The PP shall carry out Drone video survey covering the cluster, Green belt, fencing etc.,
16. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same.
17. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions


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- of Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
18. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.
 19. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.
 20. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
 21. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
 22. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.
 23. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.
 24. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
 25. Impact on local transport infrastructure due to the Project should be indicated.
 26. A tree survey study shall be carried out (nos., name of the species, age, diameter etc..) both within the mining lease applied area & 300m buffer zone and its management during mining activity.


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27. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.
28. Public Hearing points raised and commitments of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project and to be submitted to SEIAA/SEAC with regard to the Office Memorandum of MoEF& CC accordingly.
29. The Public hearing advertisement shall be published in one major National daily and one most circulated vernacular daily.
30. The PP shall produce/display the EIA report, Executive summary and other related information with respect to public hearing in Tamil Language also.
31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.
32. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the **appendix-I** in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
33. Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner
34. A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
35. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
36. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and


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- periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
 38. The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
 39. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
 40. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
 41. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.
 42. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.
 43. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.

SEIAA Remarks: -

The proposal was placed in the 616th Authority meeting held on 10.05.2023. The Authority noted that the proposal was placed in the 366th SEAC Meeting held on 30.03.2023.

Based on the presentation made by the proponent SEAC recommended grant of Terms of Reference (TOR) with Public Hearing.


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Subsequently, the proposal was placed in 613th SEIAA meeting held on 21.04.2023. The Authority after detailed deliberation decided to call for additional details as follows

1. The PP shall submit NOC from Director, Agriculture department that the proposed mining lease area is not fit for agriculture purpose and NOC for Local panchayat.
2. Report on loss of landcover and change in land use pattern due to the proposed activity.
3. Impact of mining on agriculture and allied activities in and around the proposed mine lease area.
4. Letter from the Director, Department of Agriculture stating that the proposed mine lease area about the productivity status and productive potential of the land.
5. Remarks from local panchayat on the proposed mining activity.
6. The proponent shall study the impact of mining activity on the odai passing in the northern side of the proposed mine lease area and shall submit the mitigation measures.

upon receipt of the above said details, further deliberation shall be done.

Subsequently, the proponent had furnished the details called for to this O/o SEIAA on 08.05.2023.

Based on the above, the proposal was placed in 616th Authority meeting held on 10.05.2023. After detailed deliberations, the Authority accepted the recommendations of SEAC and the request given by the proponent and decided to grant Terms of Reference subject to the conditions as recommended by SEAC in addition to the following conditions and conditions stated therein vide Annexure 'B':

1. The PP shall submit NOC from Director, Agriculture department that the proposed mining lease area is not fit for agriculture purpose and NOC from Local panchayat along with EIA Report.
2. Report on loss of landcover and change in land use pattern due to the proposed activity shall be submitted along with EIA Report.
3. Impact of mining on agriculture and allied activities in and around the proposed mine lease area shall be submitted along with EIA Report.
4. Letter from the Director, Department of Agriculture stating that the proposed mine lease area about the productivity status and productive potential of the land shall be submitted along with EIA Report.


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5. Remarks from local panchayat on the proposed mining activity shall be submitted along with EIA Report.
6. The proponent shall study the impact of mining activity on the odai passing in the northern side of the proposed mine lease area and shall submit the mitigation measures along with EIA Report.

Annexure 'B'

Cluster Management Committee

1. Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.
2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,
3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.
4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.
5. The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.
6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.
7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.
8. The committee shall furnish the Emergency Management plan within the cluster.
9. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.
10. The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.
11. The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.


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Impact study of mining

12. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following
- a) Soil health & soil biological, physical land chemical features.
 - b) Climate change leading to Droughts, Floods etc.
 - c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people.
 - d) Possibilities of water contamination and impact on aquatic ecosystem health.
 - e) Agriculture, Forestry & Traditional practices.
 - f) Hydrothermal/Geothermal effect due to destruction in the Environment.
 - g) Bio-geochemical processes and its foot prints including environmental stress.
 - h) Sediment geochemistry in the surface streams.

Agriculture & Agro-Biodiversity

13. Impact on surrounding agricultural fields around the proposed mining Area.
14. Impact on soil flora & vegetation around the project site.
15. Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.
16. The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.
17. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.
18. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.

Forests

19. The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.


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20. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.
21. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.
22. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.

Water Environment

23. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.
24. Erosion Control measures.
25. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas.
26. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.
27. The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.
28. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.
29. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.
30. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.

Energy

31. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.


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Climate Change

32. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.
33. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.

Mine Closure Plan

34. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.

EMP

35. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.
36. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.

Risk Assessment

37. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.

Disaster Management Plan

38. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/unfavorable accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.

Others

39. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.
40. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.


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- 4). The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

A. STANDARD TERMS OF REFERENCE

- 1) Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
- 2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 3) All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
- 4) All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
- 5) Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
- 6) Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
- 7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of


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the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.

- 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
- 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
- 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
- 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
- 12) Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked


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- out with cost implications and submitted.
- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/ (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
 - 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
 - 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
 - 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
 - 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly


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brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.

- 22) One season (non-monsoon) [i.e., March-May (Summer Season); October-December (post monsoon season); December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the


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working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

- 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
- 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
- 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific


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occupational health mitigation measures with required facilities proposed in the mining area may be detailed.

- 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- 37) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed: -
 - a) Executive Summary of the EIA/EMP Report
 - b) All documents to be properly referenced with index and continuous page numbering.
 - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
 - e) Where the documents provided are in a language other than English, an English


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translation should be provided.

- f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
- g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
- i) As per the circular no. J-11011/618/2010-IA. II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

In addition to the above, the following shall be furnished: -

The Executive summary of the EIA/EMP report in about 8-10 pages should be prepared incorporating the information on following points:

1. Project name and location (Village, District, State, Industrial Estate (if applicable)).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.


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7. Details of village map, "A" register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining standing that there is no other Minerals/resources like sand in the quarrying area within the approved depth of mining and below depth of mining and the same shall be furnished in the EIA report.
10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
11. Detail plan on rehabilitation and reclamation carried out for the stabilization and restoration of the mined areas.
12. The EIA study report shall include the surrounding mining activity, if any.
13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of its acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
20. Likely impact of the project on air, water, land, flora-fauna and nearby population
21. Emergency preparedness plan in case of natural or in plant emergencies
22. Issues raised during public hearing (if applicable) and response given
23. CER plan with proposed expenditure.
24. Occupational Health Measures
25. Post project monitoring plan


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26. The project proponent shall carry out detailed hydro geological study through intuitions/NABET Accredited agencies.
27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
28. The proponent shall propose the suitable control measure to control the fugitive emissions during the operations of the mines.
29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
30. Reserve funds should be earmarked for proper closure plan.
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

Besides the above, the below mentioned general points should also be followed: -

- a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b. All documents may be properly referenced with index, page numbers and continuous page numbering.
- c. Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF& CC vide O.M. No. J-11013/41/2006-IA. II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no F. No.J -11013/77/2004-IA-II(I) dated 2nd December, 2009, 18th March 2010, 28th May 2010, 28th June 2010, 31st December 2010 & 30th September 2011 posted on the Ministry's website <http://www.moef.nic.in/> may be referred.


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- After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned points, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.
- The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.
- The TORs with public hearing prescribed shall be **valid for a period of three years** from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.


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Copy to:

1. The Additional Chief Secretary to Government, Environment & Forests Department, Govt. of Tamil Nadu, Fort St. George, Chennai - 9
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi 110032.
3. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032.
4. The APCCF (C), Regional Office, MoEF& CC (SZ), 34, HEPC Building, 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai -34.
5. Monitoring Cell, IA Division, Ministry of Environment, Forests & CC, Paryavaran Bhavan, CGO Complex, New Delhi 110003
6. The District Collector, Kancheepuram District.
7. Stock File.

From

Thiru. A. Arumuganainar, M.Sc.,
Assistant Director (i/c),
Dept. of Geology and Mining,
Kancheepuram.

To

Tvl.Murugappa Blue Metals,
Partner Thiru.R.Sivakumar,
S/o.Ramalingam,
No.3, Bagavathsingh Nagar,
Thirutheri,
Singaperumal Koil,
Chengalpattu Taluk and District.

Rc.No.153/Q1/2021 Dated. 15.12.2022

Sir,

Sub: Mines and Quarries - Kancheepuram District -
Uthiramerur Taluk - Sirumailur village -
SF.Nos.15/1 (P) (0.05.12), 15/2 (0.05.02), 15/3 (P)
(0.01.57), 15/4 (P) (0.01.22), 15/5 (P) (0.01.08),
15/6 (P) (0.01.08), 15/7 (0.14.0) 15/8 (0.07.0),
15/9 (0.07.5) 15/10 (0.15.0), 15/11 (0.01.0), 15/12
(0.05.5), 15/13A (0.02.0), 15/13B (0.03.05), 16/5
(P) (0.12.70), 16/6 (0.03.52) and 16/7 (0.08.0) over
an extent of 1.39.81 Hect. - Details of quarries
situated within 500 meter radial distance -
furnished - reg.

- Ref: 1. Precise are notice issued by the Assistant
Director, Geology and Mining, Kancheepuram
in Rc.No.153/Q1/2021, dated.18.11.2022.
2. Representation of Tvl.Murugappa Blue
Metals,Singaperumal koil letter dated.
13.12.2022.

With reference to your letter in the reference 2nd cited, the details
of existing, proposed and abandoned quarries located within 500 meter
radius from the proposed Rough Stone quarry, over an extent of
1.39.81 Hectares of patta lands in S.F.Nos. 15/1 (P) (0.05.12), 15/2
(0.05.02), 15/3 (P) (0.01.57), 15/4 (P) (0.01.22), 15/5 (P) (0.01.08),
15/6 (P) (0.01.08), 15/7 (0.14.0) 15/8 (0.07.0), 15/9 (0.07.5) 15/10
(0.15.0), 15/11 (0.01.0), 15/12 (0.05.5), 15/13A (0.02.0), 15/13B
(0.03.05), 16/5 (P) (0.12.70), 16/6 (0.03.52) and 16/7 (0.08.0) of
Sirumailur Village, Uthiramerur Taluk, Kancheepuram District are as
follows.

1. Existing quarries:

Sl. No.	Name of the lessee / permit holder	Name of the Mineral	Village & Taluk	S.F. Nos.	Extent (in hecets)	Lease period
1	S.Murugesan, S/o.Swaminathan 1/52, Palaiyur, Alangudi Taluk Pudukottai, District.	Rough stone and Gravel	Sirudhamur Uthiramerur	324/4A 324/4B1 324/3B2 324/5 324/6 324/7A 324/8B	3.11.00	09.05.2018 to 08.05.2023


II. Proposed Quarries :

Sl. No.	Name of the lessee / permit holder	Name of the Mineral	Village & Taluk	S.F. Nos.	Extent (in hecets)	Remarks
1.	Tvl.Murugappa Blue Metals, Partner Thiru.R.Sivakumar, S/o.Ramalingam, No.3, Bagavathsingh Nagar, Thirutheri, Singaperumal Koil, Chengalpattu Taluk and District.	Rough Stone and Gravel	Sirumailur, Uthiramerur	15/1 (P) 15/2 15/3 (P) 15/4 (P) 15/5 (P) 15/6 (P) 15/7 15/8 15/9 15/10 15/11 15/12 15/13A 15/13B 16/5 (P) 16/6 and 16/7	1.39.81	Under Processing (Present Application)
2.	Thiru.L.Muthuraj, No.17/32, Nehru Nedunchalai, PV Nagar, Nanganallur, Chennai-61.	Rough Stone and Gravel	Padur Uthiramerur	114/1, 114/2, 114/3, 114/4 etc.,	1.40.90	Under Processing

3.	M.R.Govidan, S/o.Ramasamy, No.398 Gandhi Street, Unamancheri, Chengalpattu	Rough stone and Gravel	Sirudamur, Uthiramerur	330/2, 330/3A, 330/3B, 331/1 331/2, 331/3, 331/4A, 331/4B, 331/5A 331/6 331/7A 331/7B 331/8A 331/8B 331/5B	3.28.50	Under Processing
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III. Abandoned quarries :

Sl. No.	Name of the lessee / permit holder	Name of the Mineral	Village & Taluk	S.F. Nos.	Extent (in hecets)	Lease period
1	P.Ashokkumar, S/o.Parameshwaran, Ompinus square, Brikiline Road, Purasawakkam, Chennai-7.	Rough stone and Gravel	Padur, Uthiramerur	131/1	1.62.0	07.06.2013 to 06.06.2018.
2	M.R.Govindan, S/o.Ramasamy, No.398,Gandhi Road, Unamancherry, Chennai-48.	Rough stone and Gravel	Sirumailur & Sithalapakkam Uthiramerur.	3/1A, 3/1B, 3/2 etc.,	4.37.50	07.12.2017 to 06.12.2022
3	D.Nandakumar, S/o.Devadas, M/s.Murugappa Blue Metals, Thirutheri village, Singaperumal koil, Chengalpattu Taluk	Rough stone and Gravel	Sirumailur, Uthiramerur	11/1, 11/2A, 11/2B etc.,	3.92.50	08.12.2017 to 07.12.2022


 Assistant Director(i/c),
 Geology and Mining,
 Kancheepuram.

From
Thiru A. Arumuganainar, M.Sc.,
Assistant Director, (i/c)
Dept. of Geology and Mining,
Kancheepuram.

To
Tvl.Murugappa Blue Metals,
Partner Thiru R.Sivakumar,
S/o.Ramalingam,
No.3, Bagavathsingh Nagar,
Thirutheri,
Singaperumal Koil, Chengalpattu
Taluk and District-603 204.

Rc.No.153/ Q1 /2021, Dated 15.12.2022

Sir,

Sub: Mines and Quarries – Kancheepuram District – Uthiramerur Taluk – Sirumailur village- S.F. Nos. 15/1(P),(0.05.12), 15/2(P) (0.05.02), 15/3(P) (0.01.57), 15/4(P) (0.01.22), 15/5(P) (0.01.08), 15/6(P) (0.01.08), 15/7 (0.14.0),15/8 (0.07.0), 15/9 (0.07.5), 15/10 (0.15.0), 15/11 (0.01.0), 15/12 (0.05.5), 15/13A (0.02.0), 15/13B (0.03.05), 15/14 (0.06.0), 15/15A(0.04.0), 15/15B (0.01.5), 15/16 (0.05.0), 16/1 (0.01.5), 16/2 (0.01.5),16/3 (P) (0.16.90), 16/4(P) (0.09.05), 16/5(P) (0.12.70), 16/6 (P) (0.03.52) and 16/7 (0.08.0) - over an extent of 1.39.81 Hectares of patta lands - requested for Quarrying Rough stone and Gravel under rule 19(1) of Tamil Nadu Minor Mineral Concession Rules,1959 – by Tvl.Murugappa Blue Metals, -Mining Plan submitted for approval – **Mining Plan approved for First Five years** - directed to obtain Environmental clearance from State Level Environment Impact Assessment Authority, Tamil Nadu -Reg.

- Ref: 1. Application of Tvl.Murugappa Blue Metals, Partner Thiru.R.Sivakumar S/o.Ramalingam, No.3, Bagavathsingh Nagar, Thirutheri, Singaperumal Koil, Chengalpattu Taluk and District dt. 05.07.2021.
2. Precise are notice issued by the Assistant Director, Geology and Mining, Kancheepuram in Rc.No.153/ Mines/2021, dated. 18.11.2022.
3. Representation of Tvl.Murugappa Blue Metals, Singaperumalkoil letter dated 13.12.2022

In the reference 1st cited, one Tvl.Murugappa Blue Metals, represented by its Partner Thiru.R.Sivakumar S/o.Ramalingam, No.3, Bagavathsingh Nagar, Thirutheri, Singaperumal Koil, Chengalpattu Taluk and District has applied for quarrying Rough stone and gravel from S.F.Nos.15/1(P),(0.05.12), 15/2(P) (0.05.02), 15/3(P) (0.01.57), 15/4(P) (0.01.22), 15/5(P) (0.01.08), 15/6(P) (0.01.08), 15/7 (0.14.0),15/8 (0.07.0), 15/9

(0.07.5), 15/10 (0.15.0), 15/11 (0.01.0), 15/12 (0.05.5), 15/13A (0.02.0), 15/13B (0.03.05), 15/14 (0.06.0), 15/15A(0.04.0), 15/15B (0.01.5), 15/16 (0.05.0), 16/1 (0.01.5), 16/2 (0.01.5), 16/3 (P) (0.16.90), 16/4(P) (0.09.05), 16/5(P) (0.12.70), 16/6 (P) (0.03.52) and 16/7 (0.08.0) over an extent of 1.39.81 Hectares hectares of Sirumailur Village, Uthiramerur Taluk, Kancheepuram District under Rule 19(1) of Tamil Nadu Minor Mineral Concession Rules, 1959.


Based on the recommendations of the Revenue Divisional Officer, Kancheepuram and Inspection report submitted by the Assistant Geologist, and Special Revenue Inspector (Mines), Geology and Mining, Kancheepuram the above application was considered for quarrying Rough stone and Gravel from the above area under rule 19(1) of Tamil Nadu Minor Mineral Concession Rules, 1959 for a period of **Ten years** subject to certain conditions and precise area has been communicated to the applicant vide reference 2nd cited. As directed in the reference 2nd cited. Tvl.Murugappa Blue Metals, have submitted 3 copies of Mining Plan for approval.

In exercise of the power delegated under Rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959, I hereby approve the mining plan submitted by Tvl.Murugappa Blue Metals, Singaperumalkoil for the grant of lease to quarry Rough Stone and Gravel in S.F.Nos. 15/1(P),(0.05.12), 15/2(P) (0.05.02), 15/3(P) (0.01.57), 15/4(P) (0.01.22), 15/5(P) (0.01.08), 15/6(P) (0.01.08), 15/7 (0.14.0), 15/8 (0.07.0), 15/9 (0.07.5), 15/10 (0.15.0), 15/11 (0.01.0), 15/12 (0.05.5), 15/13A (0.02.0), 15/13B (0.03.05), 15/14 (0.06.0), 15/15A(0.04.0), 15/15B (0.01.5), 15/16 (0.05.0), 16/1 (0.01.5), 16/2 (0.01.5), 16/3 (P) (0.16.90), 16/4(P) (0.09.05), 16/5(P) (0.12.70), 16/6 (P) (0.03.52) and 16/7 (0.08.0) over an extent of 1.39.81 Hectares of Sirumailur Village, Uthiramerur Taluk, Kancheepuram District the mineable reserves of Rough stone & Gravel after leaving safety distance is arrived as **1,09,276 M³** of Rough stone and **19,332 M³** of Gravel at 100 % recovery upto a depth of 35 meter below ground level (R.L.60.0m to R.L.25.0 m) for **first five years**.

This approval is subject to the following conditions:-

- i) That the Mining Plan is approved without prejudice to any other Law applicable to quarrying Rough stone and Gravel from time to time whether such laws are made by the Central Government/State Government or any other authority.
- ii) The approval of the Mining Plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Act, 1957 or any other connected laws including Forest (Conservation) Act, 1980 Forest Conservation Rules 1981, Environment Protection Act, 1980, Indian Explosives Act, 1884 (Central Act IV of 1884) and the rules made there under the Tamil Nadu Minor Mineral Concession Rules, 1959.
- iii) The Mining Plan is approved without prejudice to any other order or direction from any Court of competent jurisdiction.

Encl: Two copies Approved Mining Plan


Assistant Director, (i/c)
Geology and Mining,
Kancheepuram.

Handwritten initials



**MINING PLAN AND PROGRESSIVE QUARRY
CLOSURE PLAN FOR SIRUMAILOUR
ROUGH STONE AND GRAVEL QUARRY**

(PREPARED UNDER RULES-41 & 42 AS AMENDED IN TAMIL NADU MINOR MINERAL CONCESSION RULES, 1959)

Patta Lands / Lease Period = Ten Years

IN

LOCATION OF THE QUARRY LEASE APPLIED AREA

EXTENT : 1.39.81ha
S.F.NOS : 15/1 (P), 2 (P), 3 (P), 4 (P), ETC.,
VILLAGE : SIRUMAILOUR
TALUK : UTHIRAMERUR
DISTRICT : KANCHEEPURAM
STATE : TAMIL NADU

FOR

APPLICANT

Tvl. Murugappa Blue Metals,

Partner Thiru.R.Sivakumar,

S/o. Ramalingam,

No.3, Bhagavatsingh Nagar, Thirutheri,

Singaperumal Koil, Chengalpattu Taluk & District,

Tamil Nadu State – 603 204.

PREPARED BY

Dr. P. Thangaraju, M.Sc., Ph.D.,

Qualified Person

Regd. Off. No.17, Advaita Ashram Road,

Alagapuram, Salem District – 636 004.

Cell: +91 94422 78601 & 94433 56539

E-mail: infogeoexploration@gmail.com



Tvl. Murugappa Blue Metals,

Partner Thiru.R.Sivakumar,

S/o. Ramalingam,

No.3, Bhagavatsingh Nagar, Thirutheri,

Singaperumal Koil, Chengalpattu Taluk & District,

Tamil Nadu State – 603 204.

CONSENT LETTER FROM APPLICANT

The Mining Plan and Progressive Quarry Closure Plan in Respect of Sirumailour Rough stone & Gravel Quarry in S.F.Nos.15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P) & 7 over an extent of 1.39.81ha of Patta lands in Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu State has been prepared by

Dr. P. Thangaraju, M.Sc., Ph.D.,

Qualified Person

We request to the Assistant Director (i/c), Department of Geology and Mining, Kancheepuram District to make further correspondence regarding the modification of the Mining Plan with the said Qualified Person at his following address.

Dr. P. Thangaraju, M.Sc., Ph.D.,

Regd. Off. No. 17, Advaita Ashram Road,

Alagapuram, Salem District – 636 004.

Cell: +91 94422 78601 & 94433 56539

We hereby undertake that all the modifications, if any made in the Mining Plan by the Qualified Person may be deemed to have been made with our knowledge and consent and shall be acceptable to us and binding on us in all respects.

Signature of the Applicant

For Tvl. Murugappa Blue Metals


(R. Sivakumar)

(Partner & Authorized Person)

Place: Chengalpattu

Date: 29.11.2022



Tvl. Murugappa Blue Metals,

Partner Thiru.R.Sivakumar,

S/o. Ramalingam,

No.3, Bhagavatsingh Nagar, Thirutheri,

Singaperumal Koil, Chengalpattu Taluk & District,

Tamil Nadu State – 603 204.

DECLARATION OF THE APPLICANT

The Mining Plan and Progressive Quarry Closure Plan in Respect of Sirumailour Rough stone & Gravel Quarry in S.F.Nos.15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P) ⁶⁷ over an extent of 1.39.81ha of Patta lands in Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu State has been prepared in full consultation with us.

We have understood its contents and agree to implement the same in accordance with Laws, Rules and Act applicable to Quarry.

Signature of the Applicant
For Tvl. Murugappa Blue Metals



(R. Sivakumar)

(Partner & Authorized Person)

Place: Chengalpattu

Date: 29.11.2022



CERTIFICATE

Certified that I am, **Dr. P. THANGARAJU, M.Sc., Ph.D.**, having an office at Regd. Off. No. 17, Advaita Ashram Road, Alagapuram, Salem – 636 004, holding a Post Graduate Degree in Geology (M.Sc. Geology) from Madras University, Chennai and I worked in the field of Geology in a role of Geologist.

Rule 15(I)(a) and (b) of Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016 stipulates the eligibility for preparing Mining plans as “(I)(a) a post graduate degree in Geology granted by a university established” and (I)(b) “Professional experience of five years of working in a supervisory capacity in the field of mining after obtaining the degree”. Since my qualification and experience are satisfied the Rule (I)(a) and (I)(b) of 15 of the said Rules, I am eligible to prepare Mining Plans for both Major and Minor Minerals.

Accordingly, I am preparing this Mining Plan and Progressive Quarry Closure Plan in Respect of Sirumailour Rough stone & Gravel Quarry in S.F.Nos.15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P) ²⁷ over an extent of 1.39.81ha of Patta lands in Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu State for **Tvl. Murugappa Blue Metals**, Partner Thiru.R.Sivakumar, S/o. Ramalingam, company at No.3, Bhagavatsingh Nagar, Thirutheri, Singaperumal Koil, Chengalpattu Taluk & District, Tamil Nadu State – 603 204. Since the Mining Plan is prepared as per the provisions contained in Rule 15(I)(a) and (I)(b) of Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016.

Signature of the Qualified Person

Dr. P. Thangaraju, M.Sc., Ph.D.,

Place: Salem

Date: 01.12.2022



Dr. P. Thangaraju, M.Sc., Ph.D.,

Regd. Off. No. 17,

Advaita Ashram Road,

Alagapuram, Salem District – 636 004.

Cell: +91 94422 78601 & 94433 56539

CERTIFICATE FROM THE QUALIFIED PERSON

This is to certify that the Provisions of under Rules 41 & 42 as per the Amended under Tamil Nadu Minor Mineral Concession Rules, 1959 have been observed in the preparation of Mining Plan and Progressive Quarry Closure Plan for Sirumailour Rough stone & Gravel Quarry in S.F.Nos.15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P) ^{8/7} over an extent of 1.39.81ha of Patta lands in Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu State has been prepared for

Tvl. Murugappa Blue Metals,

Partner Thiru.R.Sivakumar,

S/o. Ramalingam,

No.3, Bhagavatsingh Nagar, Thirutheri,

Singaperumal Koil, Chengalpattu Taluk & District,

Tamil Nadu State – 603 204.

Whenever specific permissions/ exemptions/ relaxations and approvals are required, the Applicant will approach the concerned authorities of the Assistant Director (i/c), Department of Geology and Mining, Kancheepuram District, Tamil Nadu for such permissions/ exemptions/ relaxations and approvals.

It is also certified that information furnished in the above Mining Plan are true and correct to the best of my knowledge.

Signature of the Qualified Person

Dr. P. Thangaraju, M.Sc., Ph.D.,

Place: Salem

Date: 01.12.2022



Dr. P. Thangaraju, M.Sc., Ph.D.,

Regd. Off. No. 17,

Advaita Ashram Road,

Alagapuram, Salem District – 636 004.

Cell: +91 94422 78601 & 94433 56539

CERTIFICATE FROM THE QUALIFIED PERSON

Certified that the Provisions of Mines Act, Rules and Regulations and Orders made there under have been observed in the preparation of Mining Plan and Progressive Quarry Closure Plan for Sirumailour Rough stone & Gravel Quarry in S.F.Nos.15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P) ²⁷ over an extent of 1.39.81ha of Patta lands in Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu State has been prepared for

Tvl. Murugappa Blue Metals,

Partner Thiru.R.Sivakumar,

S/o. Ramalingam,

No.3, Bhagavatsingh Nagar, Thirutheri,

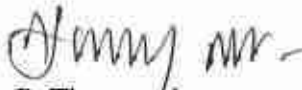
Singaperumal Koil, Chengalpattu Taluk & District,

Tamil Nadu State – 603 204.

Whenever specific permissions/ exemptions/ relaxations and approvals are required, the Applicant will approach the concerned authorities of Director General of Mines Safety (DGMS), No.5, II Street, Block-AA, Anna Nagar, Chennai-40, Tamil Nadu for such permissions / exemptions / relaxations and approvals.

It is also certified that information furnished in the Mining Plan are true and correct to the best of my knowledge.

Signature of the Qualified Person


Dr. P. Thangaraju, M.Sc., Ph.D.,

Place: Salem

Date: 01.12.2022

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**MINING PLAN AND PROGRESSIVE QUARRY CLOSURE PLAN FOR
SIRUMAILOUR ROUGH STONE AND GRAVEL QUARRY OVER AN
EXTENT OF 1.39.81ha IN SIRUMAILOUR VILLAGE, UTHIRAMERUR
TALUK, KANCHEEPURAM DISTRICT, TAMIL NADU STATE.**

(PREPARED UNDER RULES 41 & 42 AS PER THE AMENDED UNDER TAMIL NADU MINOR MINERAL
CONCESSION RULES, 1959)

1.0 INTRODUCTION AND EXECUTIVE SUMMARY

This Mining Plan and Environment Management Plan are prepared for **Tvl. Murugappa Blue Metals**, Partner Thiru.R.Sivakumar, S/o. Ramalingam, company at No.3, Bhagavatsingh Nagar, Thirutheri, Singaperumal Koil, Chengalpattu Taluk & District, Tamil Nadu State – 603 204.

The applicant applied for Rough stone and Gravel quarry over an extent of 1.39.81ha of Patta lands in S.F.Nos.15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P)  of Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu State under Rules 19 (1) of Tamil Nadu Minor Mineral Concession Rules, 1959.

The application was processed by the Assistant Director (i/c), Department of Geology and Mining, Kancheepuram District and passed a Precise Area Communication letter vide **Rc.No.153/Mines/2021, Dated: 18.11.2022** to submit Mining Plan for the approval in Department of Geology and Mining, Kancheepuram District and obtain Environmental Clearance from the SEIAA, Tamil Nadu State, with the conditions to provide (Please refer Annexure No. D):

1. Quarrying should be leave a safety distance of 10m and 7.5m from the adjacent Government Poramboke lands and Patta lands.
2. No hindrance shall be caused to the Public and Public Property while carrying out quarrying operations.
3. Within 300 meters radius of the area where the Quarrying of stone is proposed, there is a 1-storied house, a church and a saloon shop in S.F.No.62 and S.F.No.56 has 8-storied houses in total of 9 dwellings in Punsei land without affecting the above said areas adjacent to the S.F.Nos.15/1, 15/2, 15/3, 15/4, 15/5, 15/6, 16/3, 16/4, 16/5, 16/6 should be left a safety distance of 300 meters without any impact to the quarrying operation.



In order to ensure compliance of the order of the Honourable Supreme Court Dated 27.02.2012 in I.A.No.12.13.2011 in Special Leave Petition SLP (C) No 19628-19629/2009, it has been now decided that all mining projects of minor minerals including their renewal irrespective of sizes of the lease would hence forth require prior environmental clearance mining project within the lease applied area up to less than 100ha including projects or minor mineral with lease applied area less then 5ha would be treated as category B as defined in the EIA notification 2006 and will be considered by the state notified by MoEF as prescribed procedure under EIA notification 2006.

In the above circumstances the applicant through his consultant is hereby preparing the Mining Plan, Environmental Management Plan and Progressive Quarry Closure Plan for approval and subsequent submission of Form-I, Form-IM and Pre-feasibility report to obtain environmental clearance from the SEIAA, Tamil Nadu State, Rough stone and Gravel quarry. This mining plan is prepared by considering the Rules 41 & 42 as Amended in Tamil Nadu Minor Mineral Concession Rules, 1959 and as per the EIA Notification 2006 and its subsequent Amendment and judgments till 2022.

Short Notes of Mining Plan:

- a. Village Panchayat - Sirumailour
- b. Panchayat Union - Chithamur
- c. The Geological Resources are **4,61,373m³** of Rough stone and **28,648m³** of Gravel formation in the entire area.
- d. The Total Mineable Reserves are **1,20,776m³** of Rough stone and **19,332m³** of Gravel in the entire area.
- e. The proposed quantity of reserves/ (level of production) to be mined are **1,20,776m³** of Rough stone (1,09,276m³ for first five years and 11,500m³ for remaining five years period) for ten years and **19,332m³** of Gravel for three years in the entire area.
- f. Total extent of the lease applied area = 1.39.81ha
- g. Topography of the area = The area exhibits plain terrain
- h. Proposed Depth of mining = 35m for First Five Years & Ten Years
- i. Lease Period = Ten years
- j. It is a fresh lease application.
- k. Method of mining / level of mechanization.
Opencast mechanized method, the quarry operation involves shallow jack hammer drilling, slurry blasting.



- l. Type of machineries proposed in the quarrying operation is given below:
Excavators attached with rock breaker (Rental Basis).
Jack hammer, Compressor (Diesel drive) (4 Jack Hammer capacity) (Rental Basis).
- m. No trees will be uprooted due to this quarrying operation.
- n. The approach road from the main road to quarry road will be constructed and maintained in a good condition for the haulage of Rough Stone and Gravel.
- o. There is No Export of this Rough stone and Gravel.
- p. Topo sketch covering 10km and 1km radius around the proposed area with markings of habitations, water bodies including streams, rivers, roads, major structure like bridges, wells, archaeological importance, places of worships is marked and enclosed as Plate Nos. IA & IB.
- q. The lease applied area is about 1.39.81ha bounded by twenty-six corners; the corners are designated as 1-26 Clockwise from the Southwestern corner the Co – ordinates for the all the comers are clearly marked in the Quarry Lease Plan and Surface Plan enclosed as Plate No. II.
- r. The plans of proposed quarrying area showing the dimensions of the pit, their proposed depth and maximum area of proposed quarrying are enclosed as Plate Nos. III-A, III-B and IV.
- s. General conditions will not be applicable for the proposed area. The area applied for lease is 10Km away from the,
- i) *Interstate Boundary,*
 - ii) *Protected area under wild life protection ACT, 1972,*
 - iii) *Critically polluted areas as identified by CPCB,*
 - iv) *Notified Eco sensitive areas.*
- t. There is no waste anticipated during this quarry operation, hence waste dump is not proposed in the lease applied area.
- u. Around 15 employees are deploying in the quarrying operation.
- v. Total Cost of the project is about **Rs.42,92,000/-**.



w. Infrastructures around the lease applied area given below in the table:

TABLE-1

Particulars	Location	Approximate aerial distance and direction from lease applied area
Nearest Post Office	Padur	2km – Southwest
Nearest School	Sirudamur	1km – Southeast
Nearest Dispensary	Salavakkam	8km – Southeast
Nearest Town	Salavakkam	8km – Southeast
Nearest Police Station	Salavakkam	8km – Southeast
Nearest Hospital	Salavakkam	8km – Southeast
Nearest D.S.P. Office	Chengalpattu	16km – Southeast
Nearest Railway Station	Walajabad	9km – Northwest
Nearest Airport	Chennai	61km – Northeast
Nearest Seaport	Chennai	61km – Northeast
District Head quarters	Kancheepuram	19km – Northwest

**2.0 GENERAL INFORMATION**

2.1 a) Name of the Applicant : Tvl. Murugappa Blue Metals,
Partner Thiru.R.Sivakumar,
S/o. Ramalingam,

b) Address of the Applicant (With Phone No and Aadhaar No)

Address : No.3, Bhagavatsingh Nagar, Thirutheri,
Singaperumal Koil, Chengalpattu Taluk & District.
Pin Code : 603 204
Mobile No : +91 99443 33709 & 87782 39460
Aadhaar No : 7127 7596 7197 (Refer Annexure No. IX)
Email ID : murugappablucmetals.321@gmail.com

c) Status of the Applicant (Individual / Company / Firm):

The applicant is a Partnership Company. Thiru.R.Sivakumar is the Partner & Authorized Person for this company. Please refer Annexure Nos. VII & VIII.

2.2 a) Mineral which the Applicant intends to mine:

The Applicant intends to quarry Rough stone and Gravel only.

b) Precise area communication letter details received from the Competent Authority of the Government:

The precise area communication letter was received from the Assistant Director (i/c), Department of Geology and Mining, Kancheepuram District vide **Rc.No.153/Mines/2021, Dated: 18.11.2022** to submit approved mining plan and to obtain Environmental Clearance from the SEIAA, Tamil Nadu State.

c) Period of permission / lease to be granted:

Ten Years.

d) Name and address of the Qualified Person who preparing the Mining Plan:

Name : **Dr. P. Thangaraju, M.Sc., Ph.D.,**
Qualified Person
Address : Reg. No.17, Advaita Ashram Road,
Alagapuram, Salem District – 636 004.
Telephone : 0427- 2431989 (Office)
Cell No : +91 94422 78601 & 94433 56539
Email : infogeoexploration@gmail.com

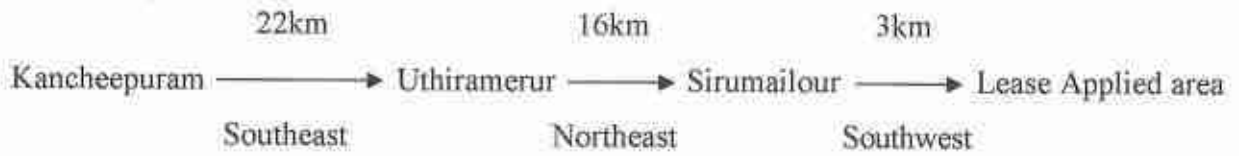
(Refer Annexure No. X & XI).



3.0 LOCATION

a) Details of the area with location map:

The lease applied area is about 19km Southeastern side of Kancheepuram town and 13km Northeastern side of Uthiramerur town, the lease applied area located along Sirumailour Village at a distance of 3km Southwestern side.



Location Map of the Lease Applied Area





TABLE-2

District	Taluk	Village	S.F. Nos.	Lease Applied Area in ha.	Patta No.
Kancheepuram	Uthiramerur	Sirumailour	15/1 (P)	0.05.12	706
			15/2 (P)	0.05.02	
			15/3 (P)	0.01.57	
			15/4 (P)	0.01.22	
			15/5 (P)	0.01.08	
			15/6 (P)	0.01.08	
			15/7	0.14.00	
			15/8	0.07.00	
			15/9	0.07.50	
			15/10	0.15.00	
			15/11	0.01.00	
			15/12	0.05.50	
			15/13A	0.02.00	
			15/13B	0.03.05	
			15/14	0.06.00	
			15/15A	0.04.00	
			15/15B	0.01.50	
			15/16	0.05.00	
			16/1	0.01.50	715
			16/2	0.01.50	715
			16/3 (P)	0.16.90	706
			16/4 (P)	0.09.05	715
			16/5 (P)	0.12.70	706
			16/6 (P)	0.03.52	715
			16/7	0.08.00	715
			Total				1.39.81

b) Classification of the area (Ryotwari/ Poramboke / others):

It is a Patta lands as classified as Punsei land (Barren land) which is not fit for vegetation/ Cultivation.

c) Ownership / Occupancy of the applied area (surface right):

It is a Patta lands. Registered in the name of the applicant (Tvl. Murugappa Blue Metals), vide Patta No. 706 and jointly registered in the name of the applicant (Tvl. Murugappa Blue Metals), Thiru.R.Sivakumar, Thiru.K.Chellamuthu and Thiru.D.Nanthakumar (Partners of Tvl. Murugappa Blue Metals), vide Patta No. 715. Refer Patta Copy enclosed as Annexure No. IV.

**d) Topo sheet No. with latitude and longitude:**

The lease applied area falls in the Topo sheet No: 57 - P/14 Latitude between: 12° 43' 08.62"N to 12° 43' 15.19"N and Longitude between: 79° 50' 28.58"E to 79° 50' 33.18"E on WGS datum-1984. Please refer the Plate Nos. I to II.

e) Existence of public road / Railway line, if any nearby and approximate distance:

The approach (metal) road is situated on the Northwestern side which connects the Major District Road (MD-789) at a distance of 300m from the applied area.

Multiple road access is available from the quarry to state highways and National Highway, no villages are enrooted hence the traffic density is not much more due to the transportation of Rough stone.

The approach road from the quarry is constructed and the same will be utilized for haulage and maintained during the entire lease period, tree sapling will be planted on the either side of the road to prevent dust and noise propagation to the nearby areas.

The Nearest Railway line is Kancheepuram – Chengalpattu which is about 7km on the Northern side of the lease applied area.

PART – A**4.0 GEOLOGY AND MINERAL RESERVES****4.1 Brief description of the Topography and general Geology of the area (with plans):**

The lease applied area is exhibits plain terrain. The area has gentle sloping towards Southern side. The altitude of the area is 60m (max) above Mean Sea level. The area is covered by 2m thickness of Gravel formation. Massive Charnockite is found after 2m (Gravel) which is clearly inferred from the nearby existing quarry pits.

The Water table is found at a depth of 68m in summer and at 65m in rainy seasons. Average annual rainfall is about 985mm.



Topographical View of lease applied area



Peninsular gneiss forms the oldest rock formations, in which the massive formation of Charnockite lies over with rich accumulation of recent quaternary formation. On regional scale of the Charnockite body is $N45^{\circ}E - S45^{\circ}W$ with dipping towards $SE60^{\circ}$.

The general geological sequences of the rocks in this area are given below:

AGE	FORMATION
Recent	- Quaternary formation (Gravel)
-----Unconformity-----	
Archaean	- Charnockite Peninsular Gneiss complex

4.2 Details of exploration already carried out if any:

State Geology and Mining Dept, Govt. of Tamil Nadu, has carried out the Regional prospecting and exploration in these areas during 1992 to 1993.

Geological Survey of India has carried out detailed mapping in Kancheepuram District. Besides, the Qualified Person and his team members made a detailed geological study of the proposed area. The Rough stone formation is clearly inferred from the nearby existing quarry pits.



4.3 Estimation of Reserves:

a) Geological reserves with geological sections on a scale of 1:1000 / 1:2000

As far as Rough stone (Charnockite) is concerned, the only practical method is the systematic geological mapping and delineation of Rough stone within the field and careful evaluation of body luster, physical properties, engineering properties and commercial aspects etc.,

Totally three sections have been drawn, one section is drawn as Length wise as (X-Y) and other two sections are drawn as Width wise as (A-B) & (C-D) to cover the maximum area considered for lease.

The Topographical, Geological Plan and Sections demarcated the commercial marketable Rough stone (Charnockite) deposit has been prepared in 1:1000 scale (please refer the Geological Plan and Sections Plate Nos. III-A & III-B). As the sale of Rough stone is in terms of cubic meters (Volume) only and not in terms of tonnage.

Geological Resources (Plate Nos. III-A & III-B):

The Geological Resources of Rough stone and Gravel are calculated up to a maximum depth of 35m (2m Gravel + 33m Rough stone) below ground level. **The total Geological resources are calculated by area method.** The total geological resources are given below:

Total Extent of the area	=	1.39.81ha	
Area in square meter	=	1.39.81 X 10,000 = 13981sq.m	
Gravel formation	=	2m below ground level	
	=	13981sq.m X 2m Depth	
	=	27,962m³ of Gravel formation	
Rough Stone	=	33m below ground level	
	=	13981sq.m X 33m Depth	
	=	4,61,373m³ of Rough stone	
Total Geological Resources of Gravel Formation	:	27,962m³	
Total Geological Resources of Rough stone	:	4,61,373m³	

**Mineable Reserves:**

The Mineable Reserves are calculated after leaving the safety distance and bench loss to a maximum depth of 35m below ground level.

TABLE-3

MINEABLE RESERVES						
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Mineable Reserves in Rough stone (m ³)	Gravel (m ³)
XY-AB	I	76	74	2	-	11248
	II	73	68	3	14892	-
	III	70	62	5	21700	-
	IV	65	52	5	16900	-
	V	60	42	5	12600	-
	VI	55	32	5	8800	-
	VII	45	22	5	4950	-
	VIII	35	12	5	2100	-
Total					81942	11248
XY-CD	I	86	47	2	-	8084
	II	83	41	3	10209	-
	III	80	35	5	14000	-
	IV	75	25	5	9375	-
	V	70	15	5	5250	-
Total					38834	8084
Grand Total					120776	19332

The mineable reserves have been computed as 1,20,776m³ of Rough stone and 19,332m³ of Gravel at the rate of 100% recovery upto a maximum depth of 35m below ground level for a period of ten years.

5.0 MINING**5.1 Method of mining (opencast / underground):**

Open cast Mechanized Mining is being carried out with 5.0 meter vertical bench with a bench width is not less than the bench height.

However, as far as the quarrying of Rough stone is concerned, observance of the provisions of Regulation 106 (2) (b) is available with Director General of Mines Safety. If the applicant/lessee intends to modify the dimensions of benches, relaxation and permission are available with Director General of Mines Safety under 106 (2) (b) of Metalliferous Mines Regulations, 1961. In such a scenario if there is any drastic change in the Resources and Reserves a modified plan will be submitted to the concerned authority for necessary relaxation, clearance and permission. The relaxation will be applied and obtained after the execution of lease deed / commencement of quarry operation.

**5.2 Mode of working (mechanized, semi mechanized, manual):**

The Rough stone is proposed to quarry at 5m bench height & width with conventional Opencast Mechanized Method.

The quarry operation involves shallow jack hammer drilling, slurry explosives in blasting, excavation, loading and transportation of Rough stone to the needy crusher.

The production of Rough stone in this quarry involves the following method which is typical for Rough stone quarrying in contrast to other major mineral mining.

Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and slurry explosives blasting, hydraulic excavators are used for loading the Rough stone from pithead to the needy crushers.

Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting. The primary boulders thus splitted are removed from the pits by excavators and further made to smaller sizes by rock breakers attached in excavators. It is a conventional opencast mechanized method of mining.

5.3 Proposed Bench Height and Width:

The Charnockite is hard and compact rock, the bench height is proposed 5.0 meter vertical bench the width of the bench is not less than the Height.

5.4 Indicate the overburden / mineral production expected pit wise as detailed below (composite plan and section showing pit layout, dumps, disposal of waste if any etc.):

The overburden in the form of Gravel, the Gravel will be directly loaded into Tipper for the filling and levelling of low-lying areas, this will be done only after obtaining permission and paying necessary seigniorage fees to the Government. The excavated Rough stone will be directly loaded into Tipper to the needy customers. The Composite year wise Development and production plan and sections indicating the Pit lay out, green belt development is shown in Plate Nos. III-A & III-B.



Yearwise development and Production

TABLE-4

FIRST FIVE YEARWISE PRODUCTION DETAILS							
Years	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Recoverable Reserves in Rough stone (m ³)	Gravel (m ³)
I	XY-AB	I	52	74	2	-	7696
		II	46	68	3	9384	-
		III	40	62	5	12400	-
		Total					21784	7696
II	XY-AB	I	24	74	2	-	3552
		II	27	68	3	5508	-
		III	30	62	5	9300	-
		IV	27	52	5	7020	-
		Total					21828	3552
III	XY-CD	IV	38	52	5	9880	-
		I	86	47	2	-	8084
		II	83	41	3	10209	-
		III	15	35	5	2625	-
		Total					22714	8084
IV	XY-AB	V	60	42	5	12600	-
		VI	55	32	5	8800	-
		Total					21400
V	XY-CD	VII	45	22	5	4950	-
		VIII	35	12	5	2100	-
		III	65	35	5	11375	-
		IV	25	25	5	3125	-
		Total					21550
Grand Total						109276	19332

The Recoverable reserves have been computed as 1,09,276m³ of Rough stone and 19,332m³ of Gravel at 100% recovery upto depth of 35m below ground level (R.L.60.0m to R.L.25.0m) for first five years.



TABLE-4A

NEXT FIVE YEARWISE PRODUCTION DETAILS						
Years	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Recoverable Reserves in Rough stone (m ³)
VI	XY-CD	IV	25	25	5	3125
		Total					3125
VII		IV	25	25	5	3125
		Total					3125
VIII		V	25	15	5	1875
		Total					1875
IX		V	23	15	5	1725
		Total					1725
X		V	22	15	5	1650
		Total					1650
Grand Total						11500

The Recoverable reserves have been computed as **11,500m³** of Rough stone at 100% recovery upto depth of 10m below ground level (R.L.50.0m to R.L.40.0m) for remaining five years.

The Recoverable reserves have been computed as **1,20,776m³** of Rough stone and **19,332m³** of Gravel at 100% recovery upto depth of 35m below ground level (R.L.60.0m to R.L.25.0m) for ten years.

The applicant ensures the total quantity proposed in the benches will not exceed during the quarrying operation. Besides the Rough stone locked up in benches will be exploited after obtaining necessary permission from the office of **Director General of Mine Safety, Chennai** region by submitting relevant documents, appropriate safety plans and its Mitigation measures.

One lorry load	=	6m ³ (approx.)
Total No of Working days	=	300 Days per year
Total quantity to be removed in these ten years plan period	=	1,20,776m ³
Hence total lorry loads per day	=	1,20,776m ³ /6m ³
	=	20129 lorry loads
	=	20129/10 years
	=	2013/300 Days
Rough stone	=	6-7 lorry loads per day



Total quantity to be removed in the first three years	=	19,332m ³
Hence total lorry loads per day	=	19,332m ³ /6m ³
	=	3222 lorry loads
	=	3222/3 Years
	=	1074/300 Days
Gravel	=	3-4 lorry load per day
Working hours = 8.30 am to 5.30 pm (with 12.30-1.30 pm lunch break)		

5.5 Machineries to be used:

For Mining:

The following machineries are utilized on rental basis for the development and production work at this quarry.

TABLE-5

I. DRILLING MACHINE:

S. No.	Type	Nos	Dia Hole mm	Size Capacity	Motive power
1	Jack-Hammer	2	30-35	1.2m to 2.0m	Compressed air
2	Compressor	1	-	400 psi	Diesel Drive

II. EXCAVATION & LOADING EQUIPMENT:

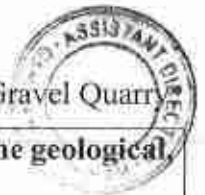
S. No.	Type	Nos	Capacity	Motive Power
1	Excavator with Bucket and Rock Breaker	1	300	Diesel Drive

III. HAULAGE WITHIN THE MINE & TRANSPORT EQUIPMENT:

S. No.	Type	Nos	Capacity	Motive Power
1	Tipper	1	20 Tonnes	Diesel Drive

5.6 Disposal of Overburden/Waste:

The overburden in the form of Gravel. The Gravel will be directly loaded into Tipper for the filling and levelling of low-lying areas. The excavated Rough stone (100%) will be directly loaded into Tipper to the needy customers. There is no Waste anticipated during this plan period hence, disposal of waste does not arise.



5.7 Brief note on conceptual mining plan for the entire lease period base on the geological, mining and Environment considerations:

Conceptual mining plan is prepared with an object of long term systematic development of benches, layouts, selection of permanent structures, depth of quarrying and ultimate pit dimensions, selection of sites for construction of infrastructure, etc.,

The ultimate pit size is designed based on certain practical parameters such as economical depth of mining, safety zones, permissible area, etc.,

As the applicant has applied quarry lease for ten years, the ultimate pit limit (dimension) at the end of this mining plan period is given below:

TABLE-6

Ultimate Pit Dimension	Length in m (Max)	Width in m (Max)	Depth in m (Max)
	164	76	35m below ground level

Greenbelt has proposed on the Panchayat roads by planting native species of Neem, Casuarina and Pongamia pinnata, etc., tree sapling. All the base line information studies like Air quality monitoring, Noise and vibration monitoring, Water analysis studies will be carried out every year as per the MoEF&CC Norms. It is propose to engage any local institution to monitor the EIA and EMP during the course of quarrying operation after the grant of quarry lease.

There is no waste anticipated during the entire life of quarry. Hence, backfilling is not possible in this quarry. After completion of quarry operation, the quarry pit will be allowed to collect the seepage and rainwater, the water storage will be kept as temporary reservoir for charging the nearby wells and the storage water will be used for afforestation purpose. The quarry pit will be fenced with barbed wire fencing to prevent inadvertent entry of public and cattle (Refer Plate No. IV).



6.0 BLASTING

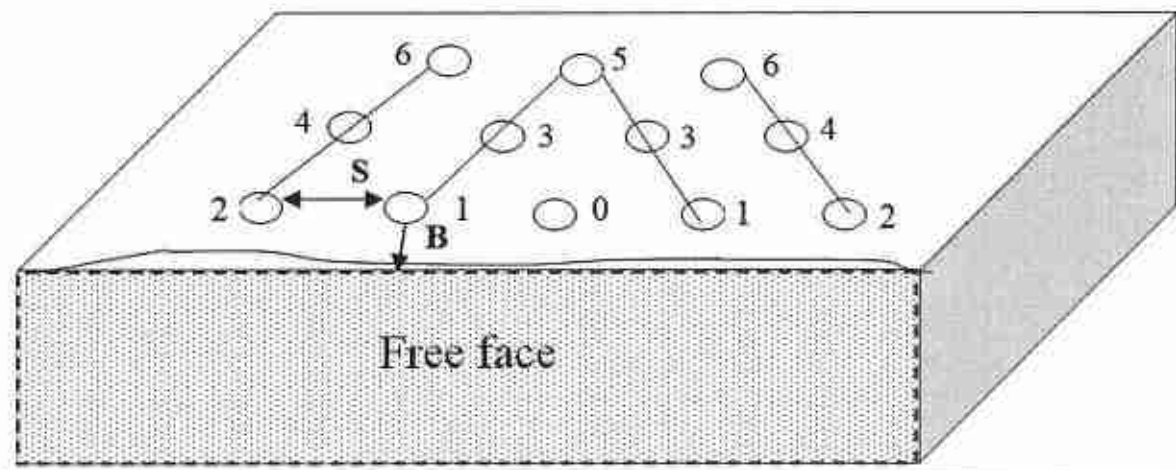
6.1 Blasting pattern:

The quarrying operation is proposed to be carried out by Mechanized Opencast Method in conjunction with conventional method of mining using jack hammer drilling and slurry blasting of shattering effect for loosening the Rough stone.

Drilling and blasting parameters are as follows:

Depth of Each hole	:	1.5m
Diameter of hole	:	30-32mm
Spacing between holes	:	1.2m
Burden for hole	:	1.0m
Pattern of hole	:	Zigzag – Multi-rows
Inclination of holes	:	80° from horizontal
Use of delay detonators	:	25millisecond relays
Detonating fuse	:	“Detonating” Cord

BLASTING PATTERN DRAWING



Staggered “V” Pattern of Blasting Design

Spacing	=	1.2m
Burden	=	1.0m
Depth of the hole	=	1.5m
No of holes proposed per day	=	36 Holes

6.2 Type of explosives to be used:

Small Dia. 25mm slurry explosives are proposed to be used for shattering and heaving effect for removal and winning of Rough stone. No deep hole drilling or primary blasting is proposed.



6.3 Measures proposed to minimize ground vibration due to blasting:

The quarry is situated more than 300m from the nearby villages, Controlled blasting measures is being adopt for minimizing ground vibration and fly rock.

Shallow depths jackhammer drilling & blasting is proposed to be carried out with minimum use of explosive mainly to give hearing effect in Rough stone for easy excavation and to control fly rock.

Delay detonators:

Delay blasting (millisecond delays) permits to divide the shot in to smaller charges, which are detonated in a predetermined millisecond sequence at specific time intervals.

The major advantages of delay blasting are:

- Reduction of ground vibration.
- Reduction in air blast.
- Reduction in over break.
- Improved fragmentation.
- Better control of fly-rock.

Blasting program for the production per day:

No of Holes	= 36 Holes
Yield	= 105 Tons
Powder factor	= 6 Tons/Kg of explosives
Total explosive required	= 18 Kg-Slurry explosives
Charge/ hole	= 0.5 Kg
Blasting at day time only	= 12.00 – 12.30p.m (whenever required)

6.4 Storage and safety measures to be taken while blasting:

The applicant will engage authorized explosive agency to carry out the small amount of blasting and it will be supervised by competent and statutory foreman/Permit Mines Manager. The explosives agencies should be having the valid Blaster certificate. He will blast holes in the quarry site. After the completion of Blasting the Explosive Agencies will take it out back the remaining quantity of Explosives. The magazine is available at the quarry site to temporarily store the explosives.



7.0 MINE DRAINAGE

7.1 Depth of water table (based on nearby wells and water bodies):

The Water Table in the area is 68m in summer season and 65m in rainy season which is observed from the nearby bore wells and the data obtained from existing private boreholes. The lease area is fully covered by Massive Charnockite formation. Hence the Ground Water problem will not arise. If water seepage may occur due to the fracture, the same will be used for Greenbelt.

TABLE-7

Type	Distance & Direction	Location
Bore Well	320m Western side	12°43'09.64"N 79°50'18.00"E

7.2 Arrangements and places where the mine water is finally proposed to be discharged:

Quarry operations are confined well above the water table during the entire lease period. If water is encountered at due to rain water and seepage, the same will be pumped out by 5HP water pumps to the Greenbelt development areas. Besides, the water will also be used for dust suppression on haul roads during Haulage of machineries.

**8.0 OTHER PERMANENT STRUCTURES (also shown in the map)****8.1 Habitations/ Villages natham:**

Within 300 meters radius of the area where the lease applied area, there is a 1-storied house, a church and a saloon shop in S.F.No.62 and S.F.No.56 has 8-storied houses in total of 9 dwellings in Punsei land areas adjacent to the S.F.Nos.15/1, 15/2, 15/3, 15/4, 15/5, 15/6, 16/3, 16/4, 16/5, 16/6 hence a safety distance of 300m has been maintained. There is no other approved habitation within 300m radius from the lease applied area.

8.2 Power Lines (HT/LT):

There is no Housing area, EB line (HT & LT Line) within the radius of 50m from the lease applied area.

8.3 Water bodies (river, ponds, lake, odai, canal, etc.,):

There is an Odai is passing on the Northern side of the lease applied area. There is no other River, Pond, Lake, Odai, Canal located within 50m radius of the lease applied area.

8.4 Archaeological / historical monuments:

There is no Archaeological / historical monuments within 500m radius from the lease applied area.

8.5 Road (NH, SH, others):

The Nearest National Highway (NH-132B) Kancheepuram – Chengalpattu is situated about 6km on the Northeastern side of the lease applied area.

The State Highway (SH-120) Walajabad – Sunguvarchathiram – Keelachery Road is situated about 9km on the Northwestern side of the lease applied area.

The Major District (MD-789) Thirumukkudal – Nelvoy – Thirukazhukundram Road is situated about 1km on the Northwestern side of the lease applied area.

8.6 Places of worships:

There is no place of worships within the radius of 500m from the lease applied area.

8.7 Reserved forest / forest / social forest / wild life sanctuary etc.,:

There is no reserved forest / forest / social forest / wild life sanctuary etc., within radius of 1km of the lease applied area.



SALIENT FEATURES

S. No.	Salient Features Present around site	Prescribed safety distance	If any present within Prescribed distance it's actual distance and direction from the area															
1.	Railways, Highways, Reservoirs or Canal	50m	None of the above situated within 50m radius.															
2.	Village Road	10m	No village road is passing within 10m radius on the lease applied area.															
3.	Habitation / Village	300m	Within 300 meters radius of the area where the lease applied area, there is a 1-storied house, a church and a saloon shop in S.F.No.62 and S.F.No.56 has 8-storied houses in total of 9 dwellings in Punsei land areas adjacent to the S.F.Nos.15/1, 15/2, 15/3, 15/4, 15/5, 15/6, 16/3, 16/4, 16/5, 16/6 hence a safety distance of 300m has been provided. There is no other approved habitation within 300m radius from the lease applied area (Refer Plate No I-B).															
4.	Adjacent Patta lands / Govt. Land	7.5m/10m	<table border="1"> <thead> <tr> <th>Direction</th> <th>Classification</th> <th>Safety Distance</th> </tr> </thead> <tbody> <tr> <td>North</td> <td>Govt. Land</td> <td>10m</td> </tr> <tr> <td>East</td> <td>Govt. Land</td> <td>10m</td> </tr> <tr> <td>South</td> <td>Patta Land</td> <td>7.5m</td> </tr> <tr> <td>West</td> <td>Patta Land</td> <td>7.5m</td> </tr> </tbody> </table> <p>(Refer Plate No. II).</p>	Direction	Classification	Safety Distance	North	Govt. Land	10m	East	Govt. Land	10m	South	Patta Land	7.5m	West	Patta Land	7.5m
Direction	Classification	Safety Distance																
North	Govt. Land	10m																
East	Govt. Land	10m																
South	Patta Land	7.5m																
West	Patta Land	7.5m																
5.	Housing area, EB line (HT & LT Line)	50m	There is no Housing area, EB line (HT & LT Line) within the radius of 50m from the lease applied area.															
6.	Boundaries of the permitted area	7.5m/10m	<p>The boundaries of the permitted areas are as follows:</p> <p>North - S.F.No.14 East - S.F.Nos.10 & 13 South - S.F.Nos.24 & 13 West - S.F.Nos.15/1(P), 2(P), 3(P), 4(P), 5(P), 6(P), 16/3(P), 4(P), 5(P) & 6(P)</p> <p>(Refer Plate No. II).</p>															
7.	Reserve forest	1km	There is no reserved forest within radius of 1km of the lease applied area (Refer Plate No. IA and IB).															



8.	Protected area / ECO sensitive area/ Wild Life Sanctuary	10km	There is no ECO sensitive Zone/ Wild Life Sanctuary/ Critically Polluted Area/ HACA/ CRZ located within 10km radius of the area (Refer Plate No. IA).
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9.0 EMPLOYMENT POTENTIAL & WELFARE MEASURES

9.1 Employment potential (skilled, semi-skilled, un skilled):

The following manpower's are proposed in the mining plan to carry out the day-to-day quarrying activities, the same employment is maintaining aimed at the proposed production target and also to comply with the statutory provisions of the Metalliferous Mines Regulations, 1961.

a. Skilled labour:

Mine Foreman	:	1
Mine Mate /Blaster	:	1
Excavator Operator	:	1
Drivers	:	1
Jack-Hammer Operator	:	4

b. Semi-skilled:

Security	:	1
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c. Unskilled:

Labour & Helper	:	2
Co-operator and Cleaner	:	4
Total	:	15

The above manpower is adequate to meet out the production schedule and the machinery strength envisaged in the mining plan and to comply with the statutory provisions of the Mines Safety Regulations. It is been ensured that the labour will not be employed less than 18 years, **No Child Labour** will engaged or entertained for any kind of quarrying operations. All the labours engaged for quarrying operations will be insured during the quarry lease period.

9.2 Welfare Measures:

a. **Drinking Water:**

Packaged drinking water is available from the nearby approved water vendors in Sirumailour which is about 3km on the Northeastern side of the lease applied area.

b. **Sanitary Facilities:**

Hygienic modern Sanitary Facilities will be constructed as semi-permanent structure and it will be maintained periodically as hygienic.



c. First aid facility:

First aid kits are kept in Mines office room, in case of such eventuality is the victim will be given first aid immediately at the site by the competent and statutory foreman/permit manager/holder will be in charge of first aid and injured person will be taken to the hospital by the applicant vehicle. Hospital is available in Salavakkam located at a distance of 8km on the Southeastern side.

d. Labour Health:

Periodically medical check-up related to occupational health safety will be conducted to all the workers in applicant own cost.

e. Precautionary safety measures to the labourers:



- Helmets,
- Mine Goggles,
- Ear plugs,
- Ear muffs,
- Dust mask,
- Reflector Jackets,
- Safety Shoes

All personnel protective devices will be provided as per the specification approved by Director of mines safety. Periodically medical check-up will be conducted for all workers for any mine health related problems. Proper training and vocational education will be given by qualified and experienced safety officer to all the employees about the safety and systematic Rough stone quarrying operations. The drillers and workers will be sent for vocational training periodically, to carry out the quarrying operations scientifically and to safe guard the men and machinery and to create awareness about conventional opencast quarrying operations.

**PART - B****10.0 ENVIRONMENT MANAGEMENT PLAN****10.1 Existing Land use pattern:**

The quarry lease applied area exhibits plain terrain. The area is a dry barren land devoid of Agriculture and Habitations. The lease applied area has utilized only for quarry operation in earlier.

LAND USE TABLE-8

Description	Present area in (ha)
Quarrying Pit	Nil
Infrastructure	Nil
Roads	Nil
Green Belt	Nil
Unutilized Area	1.39.81
Grand Total	1.39.81

10.2 Water Regime:



It is a simple opencast quarry operation. The quality of water will not be affected due to this quarrying operation. However, mitigation measures will be carried out like Garland drains constructed on all sides of quarry pit to avoid surface run-off rain water entering into the pit.

The waste water discharged to water bodies will be met the standard prescribed under the Environment (Protection) Act – 1986 by The Ministry of Environment, Forest and Climate change.









10.3 Flora and Fauna:

TABLE-9

S.No.	Name of the plant (Scientific)	Family Name	Common Name	Habit	Picture
1.	<i>Thespesia populnea</i>	Indian Tulip Tree	Poovarasu	Tree	
2.	<i>Tamarindus indica</i>	Caesalpinaceae	Puli	Tree	
3.	<i>Pongamia pinnata</i>	Fabaceae	Pungai	Tree	
4.	<i>Cassia auriculata</i>	Fabaceae	Aavarampoo	Shurb	
5.	<i>Ziziphus oenoplia.</i>	Rhamnaceae	Suraimullu, Surai ilantai	Shurb	

List of Fauna

S.No.	Scientific Name	Common Name	Picture
1.	<i>Capra hircus</i>	Goat	
2.	<i>Boigaspp</i>	Cat snake	
3.	<i>Athene brama</i>	Spotted owlet	
4.	<i>Passer domesticus</i>	House sparrow	
5.	<i>Precis hierta</i>	Yellow pansy	
6.	<i>Funambuluspalmarum</i>	Indian palm squirrel	



10.4 Climatic Conditions:

The area receives rainfall of about 985mm/annum and the rainy season is mainly from Oct - Dec during monsoon. The summer is hot with maximum temperature of 42°C and winter encounters a minimum temperature of 20°C.

10.5 Human settlement:

There are few villages located in this area within 5km radius; the approximate distance and population are given below:

TABLE-10

S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population
1.	Sirumailour	3km – Northeast	1100
2.	Sirudamur	1km – Southeast	3200
3.	Padur	2km – Southwest	800

Basic human welfare Amenities such as Health Centre, Schools, Communication Facilities, and Commercial Centres etc., are available at Salavakkam located at a distance of 8km on the Southeastern side of the area.

10.6 Plan for air, dust suppression:

The air quality will be affected by the Suspended Particulate Matter (SPM) generated by the slurry blasting, Jack-Hammer drilling, loading and unloading during the Rough stone quarry operation.

The following Mitigations measures will be carried out:

- Mist Water spraying will be carried out by means of water sprinklers to suppress the dust emission in the Haul roads.
- Vegetations will be formed on the non-quarrying area.
- Avoiding spillages during the transportation.

Air quality will be monitored periodically as per Norms and Mitigative measures carried out to prevent dust and Air propagation in to air. The estimated budget for dust suppression would be around **Rs.52,000/year**.



10.7 Plan for Noise level control:

The noise level increased due to the Drilling, Blasting, Excavation and Transportation.

Engineering Noise control:

Noise will be created due to the usage of Machineries and Vehicles. The Noise will be controlled in the following manner.

- Selection of new low – noise equipment's is proposed to be deployed for the Rough stone quarry operation.
- Modifications of older equipments.
- Implementation of effective preventive maintenance which reduces noise more than 50%.
- Developing Green belts which act as Acoustic barrier, pollution absorbent and noise controller.
- The drivers will be strictly instructed to move the vehicle during the transportation not exceed 40km per hour.
- Sentries with flags & whistle will posted in village road junction and populated area to control and regulate traffic.

Shallow holes of 32mm diameter and maximum depth of 1.5m will be drilled and conventional low power explosives such as slurry explosives, ordinary safety fuse will be used for Rough stone. Hence, ground vibration and noise pollution i.e., minimal and restricted within the quarry working area.

Noise level monitoring and other Mitigation measures will be carried out to reduce Noise and Vibration. The estimated budget for Noise level monitoring would be around **Rs.2,000/Year**.

10.8 Environment impact assessment statement describing impact of mining on the ten years:

In the mining plan proposed for a production of Rough stone does not involve deep hole drilling and blasting. Such limited mining activity is not likely to cause any impact adversely on the environment. As far as pollution of air, water and noise concerned, the Environment impact studies will be conducted as per EIA notification issued by MoEF&CC. It is B2 Category mine. The estimated budget would be around **Rs.7,60,000/-**.

10.9 Proposal for waste management:

There is no waste anticipated in this Rough stone and Gravel quarrying operation. The entire quarried out materials will be utilized (100%).



10.10 Proposal for reclamation of land affected during mining activities and at the end of mining (refilling / fencing etc.):

In the mining plan proposed only to a maximum depth of 35m below ground level has been envisaged as workable depth for safe & economic mining during entire lease applied area. There is no waste generated hence, backfilling is not possible. Hence, the quarry area will be fenced with Barbed wire fencing also safety bund constructed around the quarry to prevent inadvertent entry of public and cattle. The barbed wire fencing cost would be around **Rs.1,68,000/-**.

10.11 Programme of Greenbelt development (indicate extend, number, name of species to be afforested):

The safety zone all along the boundary barrier has been identified to be utilized for Greenbelt development. Appropriate native species of Neem, Pongamia Pinnata, Casuarina, etc., trees will be planted in a phased manner as described below.

TABLE-11

Years	No. of trees proposed to be planted	Survival %	Area to be covered sq.m	Name of the species	No. of trees expected to be grown
I	40	80	400	Neem, Pongamia Pinnata, Casuarina, etc.,	32
II	40	80	400		32
III	40	80	400		32
IV	40	80	400		32
V	40	80	400		32

Years	No. of trees proposed to be planted	Survival %	Area to be covered sq.m	Name of the species	No. of trees expected to be grown
VI	20	80	160	Neem, Pongamia Pinnata, Casuarina, etc.,	16
VII	20	80	160		16
VIII	20	80	160		16
IX	20	80	160		16
X	20	80	160		16

Nearly 2,800sq.m area is proposed to use under Greenbelt by planting 300 Number of tree saplings during ten years with an anticipated survival rate of 80% (Please refer Plate Nos. III-A & III-B). The estimated budget for plantation and maintenance of Greenbelt development would be around **Rs.30,000/-** for the period of ten years.

The Greenbelt Development will be formed in around the quarried out top benches and approach road of the lease applied area. The cost would be around **Rs.40,000/-**.

**10.12 Proposed financial estimate / budget for (EMP) environment management:**

Budget Provision for the entire quarrying period:

TABLE-12

S. No	Monitory and Analysis Description	Rate per location	No. of location	Total Charges/ six months	Total Charges/ year
1	Ambient air quality monitoring	6500	4	26000	52000
2	Noise level monitoring	250	4	1000	2000
3	Ground vibration monitoring	1000	2	2000	4000
4	Water sampling and analysis	9000	1	9000	18000
Total EMP Cost/ year					76,000

The EMP cost would be around Rs.7,60,000/- for the period of ten years.

A. Project / investment / Operational cost:

i) Land cost The Land value as per the Government Guideline land cost is about,

S.F. Nos.	Extent	Cost/Ha	Total
15/1 (P)	0.05.12	1242000	63590.4
15/2 (P)	0.05.02	1242000	62348.4
15/3 (P)	0.01.57	1242000	19499.4
15/4 (P)	0.01.22	1242000	15152.4
15/5 (P)	0.01.08	1242000	13413.6
15/6 (P)	0.01.08	1242000	13413.6
15/7	0.14.00	1242000	173880
15/8	0.07.00	1242000	86940
15/9	0.07.50	1242000	93150
15/10	0.15.00	1242000	186300
15/11	0.01.00	1242000	12420
15/12	0.05.50	1242000	68310
15/13A	0.02.00	1242000	24840
15/13B	0.03005	1242000	37881
15/14	0.06.00	1242000	74520
15/15A	0.04.00	1242000	49680
15/15B	0.01.50	1242000	18630
15/16	0.05.00	1242000	62100
16/1	0.01.50	1076500	16147.5
16/2	0.01.50	1242000	18630
16/3 (P)	0.16.90	1242000	209898
16/4 (P)	0.09.05	1242000	112401
16/5 (P)	0.12.70	1242000	157734
16/6 (P)	0.03.52	1242000	43718.4
16/7	0.08.00	1242000	99360
Total	1.39.81		1733957.7

i.e., Rs.17,34,000/-

(Source: <https://tnreginet.gov.in/portal/>)

= Rs.17,34,000/-



ii) Machinery to be used	The following machineries are proposed to meet out the productions. Excavator attached with rock breaker, Tipper, Tractor mounted compressor with jack hammer and loose tools (Rental Basis)	= Rs.9,00,000/-
iii) Refilling/ Fencing	Fencing will be constructed around the quarry pit to prevent the inadvertent entry of public and cattles cost would be around	= Rs.1,68,000/-
iv) Labourers shed	Labour sheds will be constructed as semi-permanent structure. The cost would be around	= Rs.65,000/-
v) Sanitary facility	Adequate latrine and urinal accommodation shall be provided at conveniently accessible places the cost would be around	= Rs.60,000/-
vi) Others items	First aid room & accessories	= Rs.50,000/-
vii) Drinking water facility for the labourers	Packaged drinking water will be provided for all the Labours. Drinking water will be readily available at conveniently accessible points during the whole of the working shift the cost would be around	= Rs.65,000/-
viii) Sanitary arrangement	The latrine and urinal will keep clean and sanitary condition. The maintenance cost would be around	= Rs.60,000/-
ix) Safety kit	All the Safety kit such as Helmet, Earmuffs, Goggles, Reflector Jackets, Safety shoes etc., will be provided to the workers by the applicant own cost which would be around	= Rs.60,000/-
x) Water sprinkling	Water will be sprinkled in the haul roads by water sprinklers the cost would be around	= Rs.80,000/-
xi) Garland drains Construction	Construction of garland drains to divert surface run-off from virgin area away from mining area	= Rs.1,35,000/-
xii) Greenbelt etc.	Greenbelt program will be carried out in the boundary barriers the cost would be around	= Rs.30,000/-



	Greenbelt program will be carried out in the quarried out top benches and approach road	= Rs.40,000/-
	Total Operational Cost	= Rs.34,47,000/-
B. EMP Cost: (Per year)		
	Air Quality monitoring	Rs.52,000/-
	Water Quality Sampling	Rs.18,000/-
	Noise Monitoring	Rs. 2,000/-
	Ground Vibration test	Rs. 4,000/-
	Total Cost	Rs.76,000/-
Total EMP Cost for the ten years period is Rs.7,60,000/-		
	Description	Amount (Rs.)
	A. Operational Cost	34,47,000
	B. EMP Cost	7,60,000
	Total Project Cost (A+ B)	42,07,000
	The applicant indents to involve corporate environment responsibilities (CER) activity like Water purifier, Sanitary Facilities, Garden Maintenance, Cot & Bed Facilities to the nearby Dispensary at 2.0% from the total project cost. The Cost would be around Rs.85,000/- .	85,000
	Total Cost	42,92,000
The total cost would be around forty-two lakhs and ninety-two thousand only.		



11.0 PROGRESSIVE QUARRY CLOSURE PLAN

11.1 Introduction:

The Progressive Quarry Closure Plan for Rough stone and Gravel quarry over an extent of 1.39.81ha of Patta lands in S.F.Nos.15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P) & 7 of Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu State has been prepared for **Tvl. Murugappa Blue Metals**, Partner Thiru.R.Sivakumar, S/o. Ramalingam, company at No.3, Bhagavatsingh Nagar, Thirutheri, Singaperumal Koil, Chengalpattu Taluk & District, Tamil Nadu State – 603 204.

11.2 Present Land use pattern:

LAND USE TABLE-13

Description	Present area in (ha)
Quarrying Pit	Nil
Infrastructure	Nil
Roads	Nil
Green Belt	Nil
Unutilized Area	1.39.81
Grand Total	1.39.81

11.3 Method of Mining:

Open cast Mechanized Mining is being carried out with 5.0 meter vertical bench with a bench width is not less than the bench height for Rough stone.

However, as far as the quarrying of Rough stone is concerned, observance of the provisions of Regulation 106 (2) (b) is available with Director General of Mines Safety. If the applicant/lessee intends to modify the dimensions of benches, relaxation and permission are available with Director General of Mines Safety under 106 (2) (b) of Metalliferous Mines Regulations, 1961. In such a scenario if there is any drastic change in the Resources and Reserves a modified plan will be submitted to the concerned authority for necessary relaxation, clearance and permission. The relaxation will be applied and obtained after the execution of lease deed / commencement of quarry operation.

11.4 Mineral Processing Operations:

The quarried out Rough stone will be transported by the 20tons capacity Tipper to the needy crushers. Splitting of rock mass of considerable volume from the parent rock mass by jack hammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to the needy crushers.

**11.5 Reasons for closure:**

As the mineral is not going to be exhausted during the proposed plan period no immediate closure is planned and sufficient reserves are available to carry on the activities. The reason for closure will be discussed in the ensuing mining plan.

11.6 Statutory obligations:

The applicant ensures to comply all the conditions were imposed while granting the precise area communication letter before the execution of lease deed and during the course of quarry operations.

11.7 Progressive quarry closure plan preparation:

Name and address of the Qualified Person who prepared the progressive closure plan and name and address of the executing agency who is involved in the Preparation of progressive quarry closure plan.

Name : **Dr. P. Thangaraju, M.Sc., Ph.D.,**
 Qualified Person
 Address : Regd. Off. No.17,
 Advaitha Ashram Road,
 Alagapuram, Salem - 636 004.
 Tele Fax : 0427- 2431989 (Office)
 Cell No : +91 94422 78601 & 94433 56539

Applicant will himself implement the closure plan; no outside agency will be involved.

11.8 Review of Implementation of Mining Plan including Progressive Closure Plan upto the Final Closure Plan:

Mining Plan and Progressive quarry closure plan are being submitted for the first time. It will be reviewed after ten years and review of implementation will be given with next review of mining plan.

**11.9 Closure Plan:****(i) Mined Out Land:**

At the end of mining plan period, about 0.89.40ha of area will be mined out. Land use at various stages is given in the table below.

LAND USE TABLE-14

Description	Present area in (ha)	Area required during the first five years of lease period (Ha)	Area at the end of lease period (ha)
Quarrying Pit	Nil	0.89.40	0.89.40
Infrastructure	Nil	0.01.00	0.01.00
Roads	Nil	0.02.00	0.02.00
Green Belt	Nil	0.20.00	0.28.00
Unutilized Area	1.39.81	0.27.41	0.19.41
Grand Total	1.39.81	1.39.81	1.39.81

The Greenbelt Development will be formed in around the quarried out top benches and approach road of the lease applied area.

(ii) Water quality management:

Following control measures will be adopted for controlling water pollution:

- Construction of garland drains to divert surface run-off from virgin area away from mining area.
- Construction of check dams / gully plugs at strategic places to arrest silt wash off from broken up area.
- Collection of surface run-off from broken up area in mine pits for settling and only properly settled excess water from mine pit will be discharged to nearby users. The storm water/ mine water will be used for dust suppression, greenbelt development, etc.
- Periodic analysis of mine pit water and ground water quality in nearby villages.
- The quarried-out pit will be allowed to collect rain and seepage water which will act as a reservoir for storage. This water storage will enhance the static level and ground water recharge of nearby wells and it will be used for agriculture purpose to the nearby agriculture land.
- Domestic sewage from site office & urinals/latrines provided in QL is discharged in septic tank followed by soak pits.

**(iii) Air Quality Management:**

The proposed mining method is not likely to produce much of dust and fugitive emissions to cause damage to ambient air quality of the area. Workers will be provided with personnel protective equipment like face-mask, earplug/ muffs.

For air pollution management at the progressive quarry closure plan, greenbelt will be developed to prevent and control air pollution.

(iv) Top Soil and Waste Management:

There is no topsoil or waste generated during the proposed plan period. The entire quarried out Rough stone and Gravel is utilized (100%). Hence, waste management does not arise.

(v) Disposal of mining machinery:

All the machineries will be engaged on rental basis. Hence, disposal or decommissioning of mining machinery does not arise.

(vi) Safety & Security:

Safety measures will be implemented to prevent access in the excavation area an unauthorized persons as per Mine Act 1952, MMR 1961.

- Safety measures will be implemented as per Mine Act 1952, MMR 1961, and Mines Rules 1955.
- Provisions of MMR 1961 shall be strictly followed and all roads shall be wider than the height of the bench or equal to the height of the bench and have a gradient of not more than 1 in 16.
- The bench height will be 5.0m.
- Width of working bench will be kept about 5.0m for ease of operations and provide sufficient room for the movement of equipments.
- Protective equipment like dust masks, ear-plugs/ muffs and other equipments shall be provided for use by the work persons.
- Notices giving warning to prevent inadvertent entry of persons shall be displayed at all conspicuous places and in particular near mine entries.
- Danger signs shall be displayed near the excavations and proper signal by siren alarm will be provide before blasting time to prevent any accident.
- Security guards will be posted.
- In the event of temporary closer, approaches will be fenced off and notice displayed.

**(vii) Disaster Management and Risk Assessment:**

This should deal with action plan for high-risk accidents like landslides, subsidence, flood, fire, seismic activities, tailing dam failures etc. and emergency plan proposed for quick evacuation, ameliorative measures to be taken etc. The capability of applicant to meet such eventualities and the assistance to be required from the local authorities should be described.

- The mechanized mining activities in the area may involve any high-risk accident due to side falls/collapse, flying stones due to blasting etc.
- The complete quarrying operation will be carried out under the Management and control of experienced and qualified Mines Manager having Certificate of Competency to manage the mines granted by DGMS.
- All the provisions of Mines Act 1952, MMR 1961 and Mines Rules 1955, TNMMCR 1959 and other laws applicable to mine will be strictly complied with.
- During heavy rainfall the mining activities will be suspended.
- All persons in supervisory capacity will be provided with proper communication facilities.
- Competent persons will be provided FIRST AID kits which they will always carry.
- The Greenbelt Development will be formed in around the quarried out top benches and approach road of the lease applied area.

(viii) Care and Maintenance during Temporary Discontinuance:

In case of any temporary discontinuance due to court order or due to statutory requirement or any other unforeseen circumstance following measures shall be taken for care, maintenance and monitoring of conditions.

- Notice of temporary discontinuance of work in mine shall be given to the DGMS as per the MMR 1961.
- All the mining machinery shall be shifted to a safe place.
- Entrance to the mine or part of the mine, to be discontinued shall be fenced off. Fencing shall be as per the circular 11/1959 from DGMS.
- Security Guards shall be posted for the safety and to prevent any unauthorized entry to the area.



- Carry out regular maintenance of the facilities/area detailed below in such a way as would have been done as if the mines were operation:
- Quarry roads and approach roads,
 - Fencing on approach roads,
 - Checking and maintenance of machines and equipment,
 - Drinking water arrangements,
 - Quarry office, first aid stations etc.
- Competent persons shall inspect the area regularly.
- Air, water and other environmental monitoring shall be carried out as per CPCB and IBM Guideline.
- Care and upkeep of plantation shall be carried out on regular basis.
- Status of the working and status monitoring for re-opening of the mines shall be discussed daily.

In case of discontinuance due to any natural calamities/abnormal conditions, quarrying operation will be restarted as early as possible after completing rescue work, restoring safety and security, repairs of roads etc.

(ix) Economic Repercussion of Closure of Quarry and manpower Retrenchments:

The Quarry Lease is granted for a period of maximum ten years only. As per the production Programme envisaged, there will be no effect on the man power as the majority of persons belong to nearby villages and will have an option either to be available for employment for the next contract/ lease or do the agriculture in their fields.

(x) Time Scheduling for Abandonment:

The lease applied area has enormous potential for continuance of operations even after the expiry of the lease period. The details of time schedule of all abandonment will be given at the time of final closure plan.

**(xi) Abandonment Cost:**

As at present mining is not going to be closed so abandonment cost could not be assessed.

However, based on the progressive quarry closure activities during the plan period, cost is assessed as given below:

LAND USE TABLE-15

ACTIVITY		YEARS										RATE	COST (Rs./-)
		I	II	III	IV	V	VI	VII	VIII	IX	X		
Plantation under safety zone	Nos	40	40	40	40	40	20	20	20	20	20	@100 Rs Per sapling	30000
	Cost	4000	4000	4000	4000	4000	2000	2000	2000	2000	2000		
Plantation in quarried out benches and approach road	Nos	40	40	40	40	40	40	40	40	40	40	@300 Rs Per Meter	40000
	Cost	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000		
Barbed Wire Fencing (In Mtrs) 560 Mtrs		168000	-	-	-	-	-	-	-	-	-	@300 Rs Per Meter	168000
Garland drain (In Mtrs) 450 Mtrs		135000	-	-	-	-	-	-	-	-	-	@300 Rs Per Meter	135000
TOTAL													373000

**12.0 ANY OTHER DETAILS INTEND TO FURNISH BY THE APPLICANT**

This Mining Plan for Rough stone (Charnockite) and Gravel is under Rules 41 & the Amended under Tamil Nadu Minor Mineral Concession Rules, 1959. The provisions of the Mines Act, Rules and Regulations and orders made there under shall be complied within the quarrying operation, so that the safety of the mine, machinery and person will be well protected. Permission, relaxation or exemption wherever required for the safe and scientific quarrying of the deposit will be obtained from the Department of Mines Safety. Any violation pointed out by the inspecting authorities shall be rectified as per the guidelines of the Concerned Department.

Prepared by

Dr. P. Thangaraju
Dr. P. Thangaraju, M.Sc., Ph.D.,
Qualified Person

Place: Salem

Date: 01.12.2022



This Mining Plan is approved subject to the conditions / stipulations indicated in the Mining Plan approval Letter No. 153/Q/2021 Dated. 15.12.2022

This Mining Plan is approved as per the powers conferred Under Rule 41 (2) of Tamil Nadu Minor Mineral Concession Rules, 1959

Dr. P. Thangaraju
Assistant Director of Geology and Mining,
Kancheepuram District.

Dr. P. Thangaraju
15/12/22



நக.எண். 153/கனிமம்/2021

உதவி இயக்குநர் அலுவலகம்,
புவியியல் மற்றும் சுரங்கத்துறை,
காஞ்சிபுரம்.

நாள். 18.11.2022

அறிவிக்கை

பொருள் : கனிமங்களும் குவாரிகளும் - சாதாரண கற்கள் மற்றும் கிராவல் மண் - காஞ்சிபுரம் மாவட்டம் - உத்திரமேரூர் வட்டம் - சிறுமையிலூர் கிராமம் - புல எண்கள்.15/1,(0.09.0), 15/2 (0.10.0), 15/3 (0.03.0), 15/4 (0.03.0), 15/5 (0.03.0), 15/6 (0.03.0), 15/7 (0.14.0), 15/8 (0.07.0), 15/9 (0.07.5), 15/10 (0.15.0), 15/11 (0.01.0), 15/12 (0.05.5), 15/13A (0.02.0), 15/13B (0.03.05), 15/14 (0.06.0), 15/15A(0.04.0), 15/15B (0.01.5), 15/16 (0.05.0), 16/1 (0.01.5), 16/2 (0.01.5), 16/3 (0.18.0), 16/4 (0.10.5), 16/5 (0.16.5), 16/6 (0.06.5) மற்றும் 16/7 (0.08.0) -ன் மொத்த பரப்பு 1.65.50 ஹெக்டேர் பட்டா நிலம் -சாதாரண கற்கள் மற்றும் கிராவல் மண் வெட்டியெடுக்க தி/ள்.முருகப்பா புளுமெட்டல்ஸ் நிறுவனத்தின் சார்பாக பங்குதாரர் திரு.R.சிவக்குமார் த/பெராமலிங்கம் என்பவர் - தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி எண்.19(1) - ன்கீழ் பத்து ஆண்டுகளுக்கு குவாரி குத்தகை உரிமம் கோரி மனு செய்தது - தகுதி வாய்ந்த நிலப்பரப்பாக தெரிவித்தல் - தொடர்பாக.

- பார்வை :
1. தி/ள்.முருகப்பா புளுமெட்டல்ஸ் நிறுவனத்தின் பங்குதாரர் திரு.R.சிவக்குமார் த/பெராமலிங்கம், எண்.3, பகவத்சிங் நகர், திருத்தேரி, சிங்கபெருமாள் கோயில், செங்கல்பட்டு வட்டம் (ம) மாவட்டம் என்பவரின் விண்ணப்பம் நாள் 05.07.2021.
 2. இவ்வலுவலக கடிதம் ந.க.எண்.153/க்யூ1/2021, நாள். 06.07.2021 .
 3. காஞ்சிபுரம் வருவாய் கோட்டாட்சியர் அவர்களின் அறிக்கை ந.க. எண். 1935/2021/அ1, நாள். 26.10.2021 .
 4. இவ்வலுவலக கடிதம் இதே எண்.நக.153/க்யூ1/2021, நாள் 01.03.2022.
 5. காஞ்சிபுரம் வருவாய் கோட்டாட்சியர் அவர்களின் அறிக்கை ந.க. எண். 1935/2021/அ1, நாள். 22.04.2022 .
 6. காஞ்சிபுரம், புவியியல் மற்றும் சுரங்கத்துறை உதவி புவியியலாளர் மற்றும் தனி வருவாய் ஆய்வாளர் (கனிமம்) அவர்களின் புலத்தணிக்கை அறிக்கை நாள்: 2.11.2022.
 7. தி/ள்.முருகப்பா புளுமெட்டல்ஸ் நிறுவனத்தின் பங்குதாரர் திரு.R.சிவக்குமார் த/பெராமலிங்கம் என்பவரின் கடிதம் நாள் 7.11.2022.



காஞ்சிபுரம் மாவட்டம், உத்திரமேரூர் வட்டம், சிறுமையிலூர் கிராமம், புல எண்கள். 15/1,(0.09.0), 15/2 (0.10.0), 15/3 (0.03.0), 15/4 (0.03.0), 15/5 (0.03.0), 15/6 (0.03.0), 15/7 (0.14.0),15/8 (0.07.0), 15/9 (0.07.5), 15/10 (0.15.0), 15/11 (0.01.0), 15/12 (0.05.5), 15/13A (0.02.0), 15/13B (0.03.05), 15/14 (0.06.0), 15/15A(0.04.0), 15/15B (0.01.5), 15/16 (0.05.0), 16/1 (0.01.5), 16/2 (0.01.5),16/3 (0.18.0), 16/4 (0.10.5), 16/5 (0.16.5), 16/6 (0.06.5) மற்றும் 16/7 (0.08.0) மொத்த பரப்பு 1.65.50 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல்மண் வெட்டியெடுக்க தி/ள்-முருகப்பா புருமெட்டல்ஸ் நிறுவனத்தின் பங்குதாரர் திரு.R.சிவக்குமார் த/பொராமலிங்கம், என்பவர் தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி எண்.19(1)-ன்கீழ் குவாரி குத்தகை உரிமம் கோரி பார்வை 1-ல் கண்டவாறு விண்ணப்பம் செய்துள்ளார்.

மேற்படி விண்ணப்பம் தொடர்பாக காஞ்சிபுரம் வருவாய் கோட்டாட்சியர், காஞ்சிபுரம் புவியியல் மற்றும் சுரங்கத்துறை உதவி புவியியலாளர் மற்றும் தனி வருவாய் ஆய்வாளர் ஆகியோர் மேற்காணும் விண்ணப்ப புலத்தில் தணிக்கை மேற்கொண்டு, காஞ்சிபுரம் மாவட்டம், உத்திரமேரூர் வட்டம், சிறுமையிலூர் கிராமம், புல எண்கள். 15/1,(0.09.0), 15/2 (0.10.0), 15/3 (0.03.0), 15/4 (0.03.0), 15/5 (0.03.0), 15/6 (0.03.0), 15/7 (0.14.0),15/8 (0.07.0), 15/9 (0.07.5), 15/10 (0.15.0), 15/11 (0.01.0), 15/12 (0.05.5), 15/13A (0.02.0), 15/13B (0.03.05), 15/14 (0.06.0), 15/15A(0.04.0), 15/15B (0.01.5), 15/16 (0.05.0), 16/1 (0.01.5), 16/2 (0.01.5),16/3 (0.18.0), 16/4 (0.10.5), 16/5 (0.16.5), 16/6 (0.06.5) மற்றும் 16/7 (0.08.0) மொத்த பரப்பு 1.65.50 ஹெக்டேர் பரப்பில் குவாரி அனுமதி வழங்க கீழ்க்கண்ட நிபந்தனைகளுக்குட்பட்டு பரிந்துரை செய்துள்ளனர்.

1. விண்ணப்பப் புலங்களுக்கு அருகிலுள்ள அரசு புறம்போக்கு மற்றும் பட்டா நிலங்களுக்கு முறையே 10 மீட்டர் மற்றும் 7.5 மீட்டர் பாதுகாப்பு இடைவெளிவிட்டு குவாரிப்பணி செய்யப்பட வேண்டும்.
2. பொதுமக்களுக்கோ, பொது சொத்துக்களுக்கோ யாதொரு சேதமும் இன்றி பாதுகாப்பான முறையில் குவாரிப்பணி செய்ய வேண்டும்.



3. கல்குவாரி பணி செய்ய உத்தேசிக்கப்பட்டுள்ள புலங்களிலிருந்து 300 மீட்டர் சுற்றளவில் புல எண்.62-ல் 1 தளம் வீடு, ஒரு சர்ச் மற்றும் ஒரு சலூன் கடை உள்ளது என்றும், புல எண்.56 -ல் புள் செய் நிலத்தில் 8 தளம் வீடுகள் ஆக மொத்தம் 9 குடியிருப்புகள் ஆகியவற்றிற்கு எவ்வித பாதிப்பும் இல்லாமல் தீர்ப்பு புலங்களுக்கு அருகில் உள்ள புல எண்கள். 15/1, 15/2, 15/3, 15/4, 15/5, 15/6, 16/3, 16/4, 16/5, 16/6, ~~16/7~~ ஆகிய புலங்களில் 300 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு குவாரிப் பணி செய்ய வேண்டும்.


இந்நிலையில் மனுதாரர் தி.எ.முருகப்பா புளுமெட்டல்ஸ் நிறுவனத்தின் பங்குதாரர் திரு.R.சிவக்குமார் த/பெராபலிங்கம், என்பவர் பார்வை 7ல் கண்ட கடிதத்தில் காஞ்சிபுரம் மாவட்டம், உத்திரமேரூர் வட்டம், சிறுமையிலூர் கிராமம், புல எண்கள். 15/1(P),(0.05.12), 15/2(P) (0.05.02), 15/3(P) (0.01.57), 15/4(P) (0.01.22), 15/5(P) (0.01.08), 15/6(P) (0.01.08), 15/7 (0.14.0),15/8 (0.07.0), 15/9 (0.07.5), 15/10 (0.15.0), 15/11 (0.01.0), 15/12 (0.05.5), 15/13A (0.02.0), 15/13B (0.03.05), 15/14 (0.06.0), 15/15A(0.04.0), 15/15B (0.01.5), 15/16 (0.05.0), 16/1 (0.01.5), 16/2 (0.01.5),16/3 (P) (0.16.90), 16/4(P) (0.09.05), 16/5(P) (0.12.70), 16/6 (P) (0.03.52) மற்றும் 16/7 (0.08.0) ஏற்கனவே அனுமதி கோரிய மொத்த பரப்பு 1.65.50 ஹெக்டேரில் தற்போது 1.39.81 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல்மண் வெட்டியெடுக்க தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி எண்.19(1)-ன்கீழ் குவாரி குத்தகை உரிமம் அனுமதி வழங்குமாறு கோரியுள்ளார்.

எனவே காஞ்சிபுரம் வருவாய் கோட்டாட்சியர், காஞ்சிபுரம் புவியியல் மற்றும் சுரங்கத்துறை, உதவி புவியியலாளர் மற்றும் தனி வருவாய் ஆய்வாளர் (கனிமம்) ஆகியோரின் பரிந்துரை மற்றும் மனுதாரர் கோரிக்கையின் அடிப்படையில் காஞ்சிபுரம் மாவட்டம், உத்திரமேரூர் வட்டம், சிறுமையிலூர் கிராமம், புல எண்கள். 15/1(P),(0.05.12), 15/2(P) (0.05.02), 15/3(P) (0.01.57), 15/4(P) (0.01.22), 15/5(P) (0.01.08), 15/6(P) (0.01.08), 15/7 (0.14.0),15/8 (0.07.0), 15/9 (0.07.5), 15/10 (0.15.0), 15/11 (0.01.0), 15/12 (0.05.5), 15/13A (0.02.0), 15/13B (0.03.05), 15/14 (0.06.0), 15/15A(0.04.0), 15/15B (0.01.5), 15/16 (0.05.0), 16/1 (0.01.5), 16/2 (0.01.5),16/3 (P) (0.16.90),



16/4(P) (0.09.05), 16/5(P) (0.12.70), 16/6 (P) (0.03.52) மற்றும் 16/7 (0.08.0) மொத்த பரப்பு 1.39.81 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் மண் வெட்டியெடுக்க பத்து வருட காலத்திற்கு குத்தகை உரிமம் வழங்க தகுதி வாய்ந்த நிலப்பரப்பாக தி/ள்.முருகப்பா புளுமெட்டல்ஸ் நிறுவனத்தின் பங்குதாரர் திரு.R.சிவக்குமார் த/பெராமலிங்கம் என்பவருக்கு தெரிவிக்கப்படுகிறது.

மேலும் குவாரி அனுமதி வழங்குவது தொடர்பாக வரைவு சுரங்கத் திட்டத்தை (Mining Plan) மூன்று மாத காலத்திற்குள் உதவி இயக்குநர் முன்பு சமர்ப்பித்து ஒப்புதல் பெறவும் குவாரி உரிமம் பெறுவது தொடர்பாக மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (SEIAA) இசைவினை பெற்று சமர்ப்பிக்கவும் அறிவுறுத்தப்படுகிறது.


உதவி இயக்குநர் (பொ),
புவியியல் மற்றும் சுரங்கத்துறை,
காஞ்சிபுரம்.

பெறுநர்

தி/ள்.முருகப்பா புளுமெட்டல்ஸ்,
பங்குதாரர் திரு.R.சிவக்குமார்,
த/பெராமலிங்கம்,
எண்.3, பகவத்சிங் நகர்,
திருத்தேரி,
சிங்கபெருமாள் கோயில்,
செங்கல்பட்டு வட்டம் (ம) மாவட்டம்

நகல்:-

- 1) தலைவர், மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையம், சென்னை.
- 2) ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, கிண்டி, சென்னை 600 032.



புள்ளியைப் பற்றி உரிம்கள் பட்டி

எண் 84.

உத்திரவுகளை

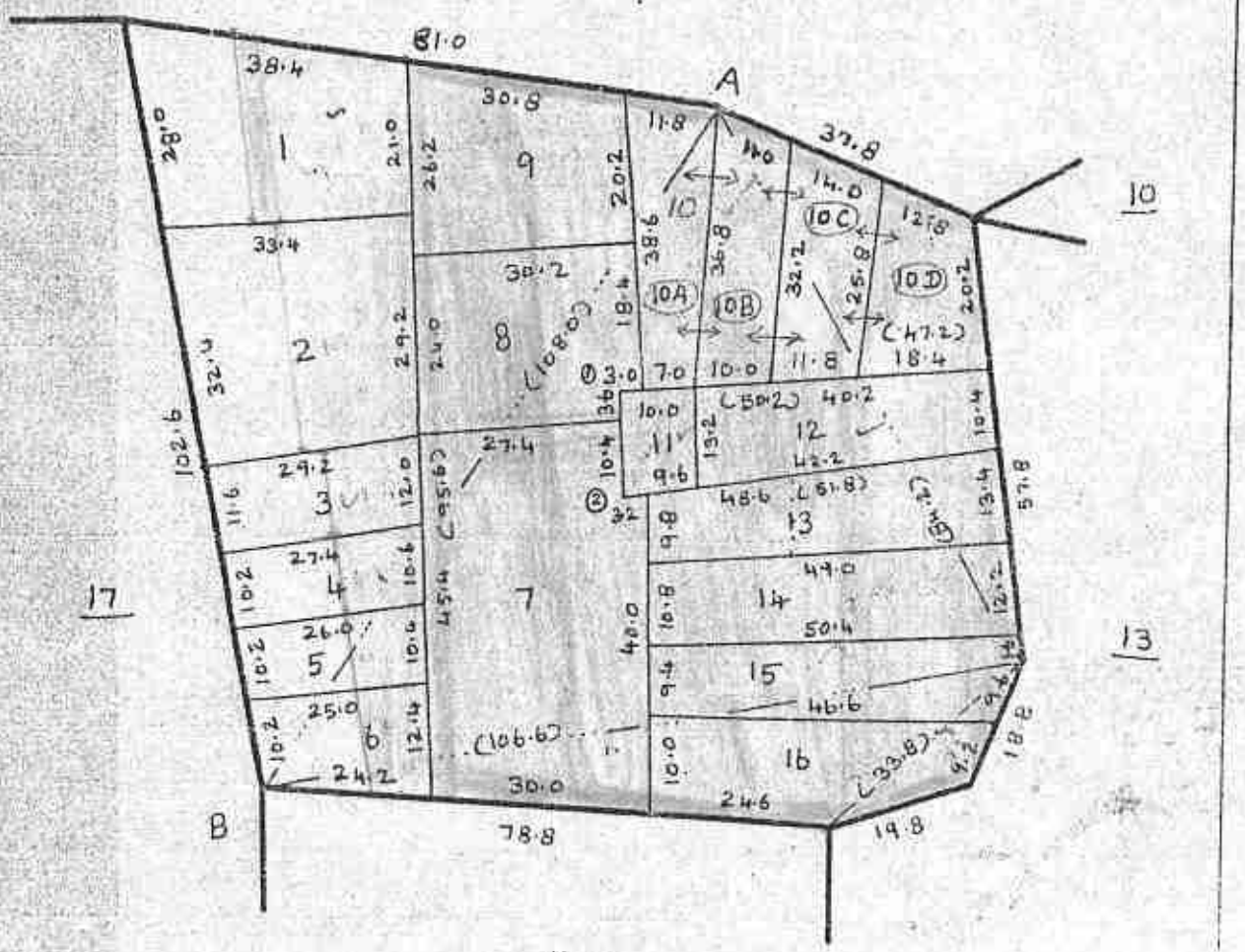
சிராமம் {
 எண் 1-2-
 பெயர் சிபு மயிலாசாமி

புல எண். 16.

பரப்பு: ஹெக்டேர்

1. ஏ. 03.0

14



LEASE APPLIED AREA

Handwritten signature and notes:
 10/2/2010 To File
 சிபு மயிலாசாமி
 உரிமையாளர்
 க. சிவசுப்பிரமணியன்
 உரிமையாளர்

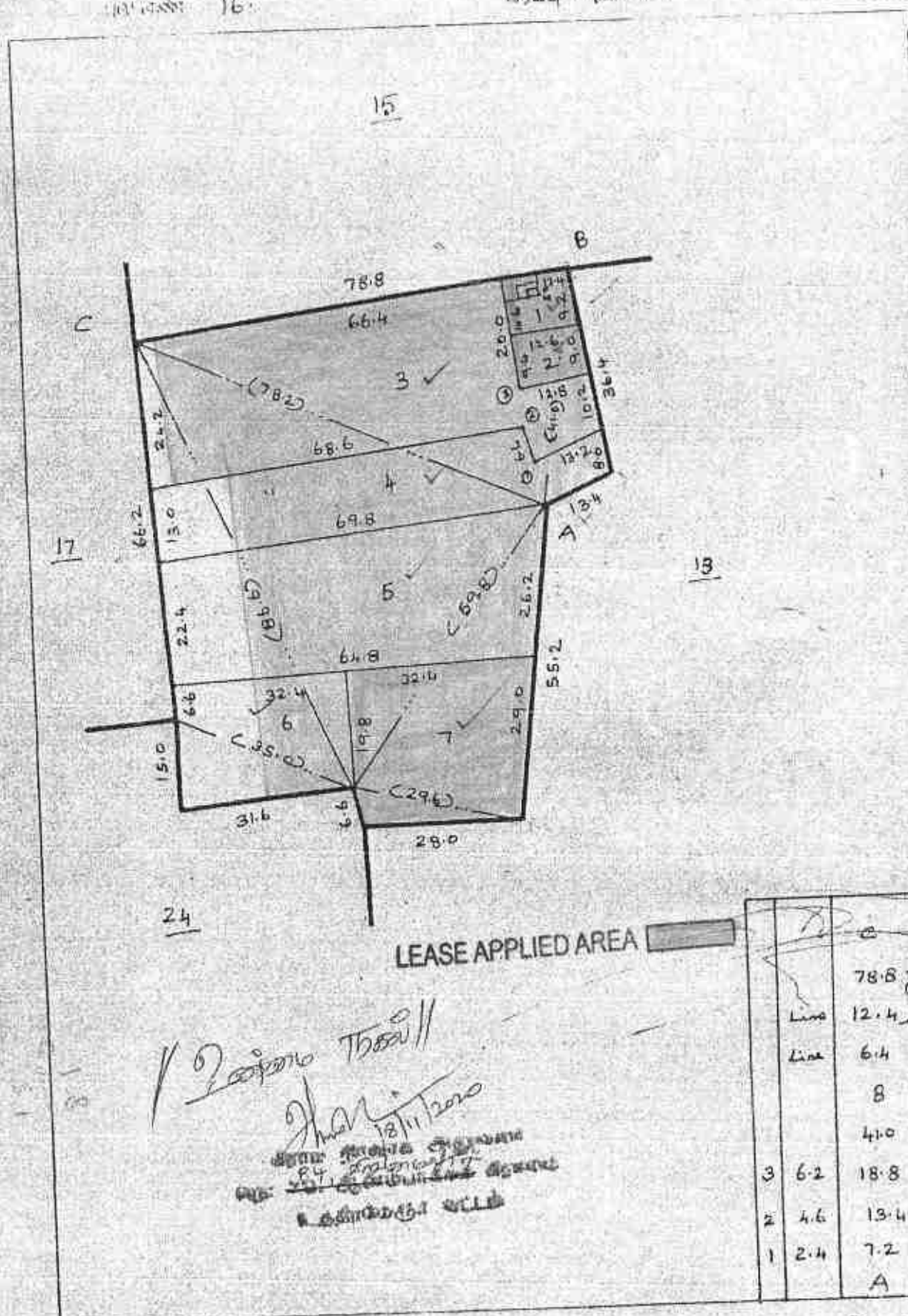
		B	
5		100.0	
2	198	48.6	
1	10.8	35.0	
		A	

புள்ளியைப் பற்றி உரிம்கள் பட்டி

பரப்பு: 1.1000 ஏ. ஏ. 81 A

பு. எண். 03.0

19/1/2010



சென்னை தலைநகர்

சென்னை தலைநகர்
சென்னை தலைநகர்
சென்னை தலைநகர்

LEASE APPLIED AREA

சென்னை தலைநகர்

சென்னை தலைநகர்

சென்னை தலைநகர்



Attended plan for encroachment of
 No. 59 MALAYANKULAM
 (encroachment of land) and No. 85
 SITHALAPAKKAM, Chidambaram Taluk,
 South Arcot District, Madras State
 Date of this plan No. 100 (Chidambaram) (1954)
 No. 100 (Chidambaram) (1954)

No. 85
SITHALAPAKKAM

No. 81
PADUR

No. 86
VAYALAKKAVOOR

No. 59
MALAYANKULAM

SIRUMAILUR
 UTHIRAMERUR TALUK
 MADHURAI DISTRICT

Scale: 1 inch = 100 feet
 1:2534



- Legend**
- Encroachment
 - Proposed Encroachment
 - Existing Encroachment
 - Proposed Road
 - Existing Road
 - Proposed Drain
 - Existing Drain
 - Proposed Canal
 - Existing Canal
 - Proposed Well
 - Existing Well
 - Proposed Pond
 - Existing Pond
 - Proposed Tank
 - Existing Tank
 - Proposed Mosque
 - Existing Mosque
 - Proposed Temple
 - Existing Temple
 - Proposed School
 - Existing School
 - Proposed Hospital
 - Existing Hospital
 - Proposed Government Office
 - Existing Government Office
 - Proposed Public Building
 - Existing Public Building
 - Proposed Railway Station
 - Existing Railway Station
 - Proposed Bus Stop
 - Existing Bus Stop
 - Proposed Market
 - Existing Market
 - Proposed Fair Ground
 - Existing Fair Ground
 - Proposed Cemetery
 - Existing Cemetery
 - Proposed Crematorium
 - Existing Crematorium
 - Proposed Public Utility
 - Existing Public Utility
 - Proposed Power Line
 - Existing Power Line
 - Proposed Telephone Line
 - Existing Telephone Line
 - Proposed Water Main
 - Existing Water Main
 - Proposed Sewer Main
 - Existing Sewer Main
 - Proposed Gas Main
 - Existing Gas Main
 - Proposed Cable Main
 - Existing Cable Main
 - Proposed Fire Hydrant
 - Existing Fire Hydrant
 - Proposed Fire Alarm
 - Existing Fire Alarm
 - Proposed Fire Station
 - Existing Fire Station
 - Proposed Fire Engine
 - Existing Fire Engine
 - Proposed Fire Hose
 - Existing Fire Hose
 - Proposed Fire Bucket
 - Existing Fire Bucket
 - Proposed Fire Ladder
 - Existing Fire Ladder
 - Proposed Fire Axe
 - Existing Fire Axe
 - Proposed Fire Pickaxe
 - Existing Fire Pickaxe
 - Proposed Fire Shovel
 - Existing Fire Shovel
 - Proposed Fire Trowel
 - Existing Fire Trowel
 - Proposed Fire Rake
 - Existing Fire Rake
 - Proposed Fire Brush
 - Existing Fire Brush
 - Proposed Fire Sledgehammer
 - Existing Fire Sledgehammer
 - Proposed Fire Hammer
 - Existing Fire Hammer
 - Proposed Fire Wrench
 - Existing Fire Wrench
 - Proposed Fire Pliers
 - Existing Fire Pliers
 - Proposed Fire Tongs
 - Existing Fire Tongs
 - Proposed Fire Hook
 - Existing Fire Hook
 - Proposed Fire Nozzle
 - Existing Fire Nozzle
 - Proposed Fire Ladder
 - Existing Fire Ladder
 - Proposed Fire Pole
 - Existing Fire Pole
 - Proposed Fire Rope
 - Existing Fire Rope
 - Proposed Fire Net
 - Existing Fire Net
 - Proposed Fire Blanket
 - Existing Fire Blanket
 - Proposed Fire Alarm
 - Existing Fire Alarm
 - Proposed Fire Station
 - Existing Fire Station
 - Proposed Fire Engine
 - Existing Fire Engine
 - Proposed Fire Hose
 - Existing Fire Hose
 - Proposed Fire Bucket
 - Existing Fire Bucket
 - Proposed Fire Ladder
 - Existing Fire Ladder
 - Proposed Fire Axe
 - Existing Fire Axe
 - Proposed Fire Pickaxe
 - Existing Fire Pickaxe
 - Proposed Fire Shovel
 - Existing Fire Shovel
 - Proposed Fire Trowel
 - Existing Fire Trowel
 - Proposed Fire Rake
 - Existing Fire Rake
 - Proposed Fire Brush
 - Existing Fire Brush
 - Proposed Fire Sledgehammer
 - Existing Fire Sledgehammer
 - Proposed Fire Hammer
 - Existing Fire Hammer
 - Proposed Fire Wrench
 - Existing Fire Wrench
 - Proposed Fire Pliers
 - Existing Fire Pliers
 - Proposed Fire Tongs
 - Existing Fire Tongs
 - Proposed Fire Hook
 - Existing Fire Hook
 - Proposed Fire Nozzle
 - Existing Fire Nozzle
 - Proposed Fire Ladder
 - Existing Fire Ladder
 - Proposed Fire Pole
 - Existing Fire Pole
 - Proposed Fire Rope
 - Existing Fire Rope
 - Proposed Fire Net
 - Existing Fire Net
 - Proposed Fire Blanket
 - Existing Fire Blanket

LEASE APPLIED AREA

No. 100 (Chidambaram) (1954) No. 100 (Chidambaram) (1954)
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No. 100 (Chidambaram) (1954) No. 100 (Chidambaram) (1954)



தமிழக அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : காஞ்சிபுரம்

வட்டம் : உத்திரமேரூர்

வருவாய் கிராமம் : சிறுமைலூர்

பட்டா எண் : 706

உரிமையாளர்கள் பெயர்

1. முருகப்பா புளு மெட்டல்ஸ் நிறுவனம்



புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
15	1	0-9.00	0.36	-	-	-	-	RPT2647/13-- 28-02-2012
15	10	0-15.00	0.60	-	-	-	-	RPT2647/13-- 28-02-2012
15	11	0-1.00	0.06	-	-	-	-	RPT2647/13-- 28-02-2012
15	12	0-5.50	0.21	-	-	-	-	RPT2647/13-- 28-02-2012
15	13A	0-2.00	0.08	-	-	-	-	RPT2647/13-- 28-02-2012
15	13B	0-3.50	0.15	-	-	-	-	RPT2647/13-- 28-02-2012
15	14	0-6.00	0.24	-	-	-	-	RPT2647/13-- 28-02-2012
15	15A	0-4.00	0.15	-	-	-	-	RPT2647/13-- 28-02-2012
15	15B	0-1.50	0.06	-	-	-	-	RPT2647/13-- 28-02-2012
15	16	0-5.00	0.19	-	-	-	-	--- 15-10-2014
15	2	0-10.00	0.42	-	-	-	-	RPT2647/13-- 28-02-2012
15	3	0-3.00	0.12	-	-	-	-	RPT2647/13-- 28-02-2012
15	4	0-3.00	0.12	-	-	-	-	RPT2647/13-- 28-02-2012
15	5	0-3.00	0.12	-	-	-	-	RPT2647/13-- 28-02-2012
15	6	0-3.00	0.11	-	-	-	-	RPT2647/13-- 28-02-2012
15	7	0-14.00	0.58	-	-	-	-	RPT2647/13-- 28-02-2012
15	8	0-7.00	0.28	-	-	-	-	RPT2647/13-- 28-02-2012
15	9	0-7.50	0.29	-	-	-	-	RPT2647/13-- 28-02-



தமிழக அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : காஞ்சிபுரம்

வட்டம் : உத்திரமேரூர்

வருவாய் கிராமம் : சிறுமைலூர்

பட்டா எண் : 715

உரிமையாளர்கள் பெயர்

1. முருகப்பா புளுமெட்டல்ஸ் நிறுவனத்தின் பங்குதாரர்கள்
2. ராமலிங்கம் மகன் சிவகுமார்
3. கிருஷ்ணன் மகன் செல்லமுத்து
4. தேவதாஸ் மகன் நந்தகுமார்



புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
12	1	0 - 35.00	1.40	-	-	-	-	--- 16-12-2013
12	3	0 - 46.00	1.84	-	-	-	-	--- 16-12-2013
12	4	0 - 31.50	1.26	-	-	-	-	--- 16-12-2013
12	5	0 - 53.00	2.13	-	-	-	-	--- 17-12-2013
16	1	0 - 1.50	0.06	-	-	-	-	--- 30-12-2013
16	2	0 - 1.50	0.06	-	-	-	-	--- 30-12-2013
16	4	0 - 10.50	0.42	-	-	-	-	--- 30-12-2013
16	5	0 - 16.50	0.66	-	-	-	-	--- 30-12-2013
16	7	0 - 8.00	0.32	-	-	-	-	--- 30-12-2013
		2 - 3.50	8.15					

குறிப்பு2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 03/03/084/00715/70483 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
2. இத் தகவல்கள் 21-11-2022 அன்று 08:31:01 AM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

ANNEXURE



6

தி.பி.எண். 84, சி.கு.பி.லுர்

	2	3	4	5	6	7	8	9	10	11	
12	5	12-பா	ர	பு	...	8-1	4	4 00	0 53 0	2 13	30 அ. ஆண்டர் எம்மாள்.
									1 97 5	7 91	
13	...	13	அ	பு	...	...	...	...	2 95 5	...	...
14	...	14	அ	பு	...	...	...	...	1 26 5	...	...
15	1	15-1	ர	பு	...	8-1	4	4 00	0 09 0	0 36	40 மொ. எல்லன்.
	2	-2	ர	பு	...	8-1	4	4 00	0 10 0	0 42	40 மொ. எல்லன்.
	3	-3	ர	பு	...	8-1	4	4 00	0 03 0	0 12	40 மொ. எல்லன்.
	4	-4	ர	பு	...	8-1	4	4 00	0 03 0	0 12	40 மொ. எல்லன்.
	5	-5	ர	பு	...	8-1	4	4 00	0 03 0	0 12	40 மொ. எல்லன்.
	6	-6	ர	பு	...	8-1	4	4 00	0 03 0	0 11	40 மொ. எல்லன்.
	7	-7	ர	பு	...	8-1	4	4 00	0 14 0	0 58	40 மொ. எல்லன்.
	8	-8	அ	பு	...	8-1	4	4 00	0 07 0	0 28	399 நா முருகன் (1), நா குப்பன் (2), நா தட்சிணா (3).
	9	-9	ர	பு	...	8-1	4	4 00	0 07 5	0 29	40 மொ. எல்லன்.
	10	-10	ர	பு	...	8-1	4	4 00	0 15 0	0 60	272 நா முருகன்.
	11	-11	ர	பு	...	8-1	4	4 00	0 01 0	0 06	463 மொ. வரதன் மற்றும் ஐந்து பேர்களும்.
	12	-12	ர	பு	...	8-1	4	4 00	0 05 5	0 21	271 நா முருகன்.
13A	-13பா	ர	பு	...	8-1	4	4 00	0 02 0	0 08	272 நா முருகன்.	
13B	-13பா	ர	பு	...	8-1	4	4 00	0 03 5	0 15	399 நா முருகன் (1), நா குப்பன் (2), நா தட்சிணா (3)	

மேய்க்கால்.

வாய்க்கால்.

* விவரப்பட்டியலைப் பார்க்கவும்

2020/11/20
சி.கு.பி.லுர்
தமிழ்நாடு அரசு போக்குவரத்துத்துறை



வி. எ. நெ. 84 நிதியறிக்கை

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15-14	மாடுபட்டி	யூ	08-10	4	4 00	0 06 00	0 24	899	நா. முருகன் (1), நா. குப்பன் (2), நா. தட்சிணா (3)
5A	15	15-14	மாடுபட்டி	யூ	8-1	4	4 00	0 04 00	0 35	199	நா. முருகன் (1), நா. குப்பன் (2), நா. தட்சிணா (3)
5B	15	15-14	மாடுபட்டி	யூ	08-10	4	4 00	0 01 50	0 06	840	மெர. எஸ்.லன்.
6	16	16-15	மாடுபட்டி	யூ	8-1	4	4 00	0 05 00	0 19	40	மெர. எஸ்.லன்.
										1 03 0	4 14
16	16	16-15	மாடுபட்டி	யூ	08-1	4	4 00	0 01 50	0 06	400	த. நல்லாள் (1), த. வீராசாமி (2), த. பெரன் ரங்கம் (3)
2	17	17-16	மாடுபட்டி	யூ	08-1	4	4 00	0 03 50	0 06	49	த. நல்லாள்
3	18	18-17	மாடுபட்டி	யூ	08-1	4	4 00	0 04 00	0 07	321	த. வீராசாமி
4	19	19-18	மாடுபட்டி	யூ	08-1	4	4 00	0 10 50	0 42	238	த. பெரன் ரங்கம்
5	20	20-19	மாடுபட்டி	யூ	08-1	4	4 00	0 16 50	0 60	191	த. நல்லாள்
6	21	21-20	மாடுபட்டி	யூ	08-1	4	4 00	0 06 50	0 26	321	த. வீராசாமி
7	22	22-21	மாடுபட்டி	யூ	08-1	4	4 00	0 08 00	0 32	235	த. பெரன் ரங்கம்
										0 62 50	2 51
17	23	23-22	மாடுபட்டி	யூ	8-1	4	4 00	0 16 00	0 63	401	வ. சந்திரன் (1), வ. செல்வ ராஜ் (2), வ. செல்வன் (3)
2	24	24-23	மாடுபட்டி	யூ	8-1	4	4 00	0 15 00	0 60	31	மு. ஜனகன் குந்தாள்
3	25	25-24	மாடுபட்டி	யூ	8-1	4	4 00	0 30 50	1 22	31	மு. ஜனகன் குந்தாள்
4	26	26-25	மாடுபட்டி	யூ	8-1	4	4 00	0 17 00	0 28	225	தே. பெருமாள்
5	27	27-26	மாடுபட்டி	யூ	8-1	4	4 00	0 06 50	0 24	401	வ. சந்திரன் (1), வ. செல்வ ராஜ் (2), வ. செல்வன் (3)

Handwritten signature and official stamp at the bottom right corner.



தமிழ்நாடு தமில்நாடு TAMILNADU

13255
28/8/12

M/S. MURUGAPPA BLUE METALS

AF 535246
B.NAINA MOHAMED
STAMP VENDOR
L. No: 29/CH(S)/2010
Chromepet, Chennai-600 044

PARTNER SHIP DEED

This Deed of Partnership entered into this 31st day of August 2012 between :

- 1. MR. R.SIVAKUMAR S/o Ramalingam, Aged about 46 years, residing at No.12/11,Rajiv Gandhi Second Street, Lakshmipuram, Chromepet, Chennai – 600 044, Party of the First Part.
- 2. Mr.K.CHELLA MUTHU S/o V.Krishnan Naicker, Aged about 39 years, residing at Old No.10, New No.6/6, Kulakkarai 3rd Cross Street, Lakshmipuram, Chromepet, Chennai – 600 044, Party of the Second Part.
- 3. Mr.D.NANTHA KUMAR, S/o Devadoss, Aged about 34 years, residing at No.132, Nellur Kollamedu, Mullikulathur Post, Thirukazhukundram Taluk, Kancheepuram District, Pincode – 603 109, Party of the Third Part.

WHEREAS the parties first and second part,have agreed to carry on business in Partnership under the name and style of M/S MURUGAPPA BLUE METALS.



Handwritten signatures and names of the partners.



M/S. MURUGAPPA BLUE METALS

AF 535247
B.NAINA MOHAMED
STAMP VENDOR
L No: 29/CH(S)/2010
Chrompet, Chennai-600 044

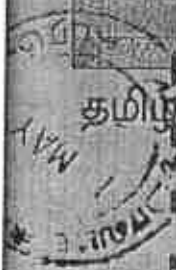
-2-

NOW THIS DEED OF PARTNERSHIP WITNESSETH that the parties hereto have constituted themselves into a partnership as and from the 31st day of August 2012 subject to the following terms and conditions.

1. The name and style of the firm shall be **M/S MURUGAPPA BLUE METALS.**
2. The firm shall be situated at Survey No.109B, Shop No.3, Bhagavatsingh Nagar, Thirutheri, Singaperumal Koil, Pincode – 603 204, and or any other place or places as the partners mutually agreed upon.
3. The object of the firm is to Manufacturing, Trading, Exporting and such other business as the partners may decide from time to time.

[Handwritten signatures]
de. ch. n. m. s.
of. v. s. s.





தமிழ்நாடு தமில்நாடு TAMILNADU

12253
28/8/12

M/s. MARIYATHA BUNG MATHAS

AF 535248

B.NAINA MOHAMED
STAMP VENDOR
L No: 29/CH(S)/2010
Chromepet, Chennai-600 027

-3-

4. The Capital of the firm shall be Rs.30,00,000/- (Rupees Thirty lakhs only) It shall be contributed in the following manner the first party Rs.10,00,000/- the second party Rs.10,00,000/- and the Third Party Rs.10,00,000/- All further contributrions additins and accretions in the form of profits remuneration interest shall from part of capital

5. The profits or losses of the firm after paying taxes remuneration and interest to Partners shall be shared in the following ration

Mr. R.SIVAKUMAR	33.3%
Mr.K.CHELLAMUTHU	33.3%
Mr.D.NANDHAKUMAR	33.3%

6. The PARTNERSHIP shall be AT WILL

7. The first, second and third partners shall be the working partners of the firm and each partner is entitled to a remuneration of Rs.15,000/- per month However in case of loss or inadequacy of profits, the partners can consider the payment of remuneration at such amounts as may be decided by the partners from time to time



[Handwritten signature]
B. Naina Mohamed
Stamp Vendor



- 8. The interest of 12% Per annum shall be paid to partners on their capital account in the firm, which shall include all credits of any nature credited to the capital account from time to time including accumulations of profits, remuneration and interest. However in case of loss or inadequacy of profits, the partners can consider the payment of interest at such lower rates as may be decided by the partners.
- 9. The salary wages rent and all taxes duties repair and out goings in respect of the said shop or premises or places of business of the partnership shall be paid from and out of the bank account of the partnership firm by periodically maintaining proper and accurate accounts.
- 10. The partners shall bear all losses including the loss of capital in proportion to the capital contribution.
- 11. If moneys are required for the partnership the same may be provided by all or any of the partners hereto and the same shall be credited to the loan account of the partner concerned in the books of the firm and shall bear interest at the rate not exceeding 12% per annum.
- 12. All acts done and instrument executed shall be done and executed in the name of the firm
- 13. No partner hereto shall without consent of the other partner hereto assign or mortgage his interest in the partnership to any other person.
- 14. The parties hereto agree that they may admit any new partner or partners under such terms and conditions as they may deem fit.
- 15. Upon dissolution of assets and liabilities of the partnership shall be distributed among the partners in the proportion in which they are entitled to share the profits or loss of the firm
- 16. The partners hereto shall have the powers to do all acts necessary for carrying on to the business including the right to appoint such members of th staff as may be considered necessary for the proper conduct of the business. This power includes the power to discharge, remove or dismiss all or any of the members of the staff and to re-appoint all or any of them.
- 17. The partners may be mutual consent convert and modify the nature of business and the constitution of the partnership for better trade and profit.



[Handwritten signature]
[Handwritten signature]
[Handwritten signature]



- 18. All loans borrowed on behalf of the firm shall be done by the partners jointly.
- 19. None of the partners hereto shall pledge the credit of the partnership business without the written permission of the other partners.
- 20. The property books of accounts of the firm shall be maintained for the business of the firm in which all receipts and expenses of the assets and liabilities relating to the business of the firm shall be recorded and accounts of the firm shall be closed every year on 31st March of such year and the first of such accounts shall be made on 31st March 2013. The Net Profit and loss shall be divided among the partners and credited or debited as the case may be in the account of the Partners hereto as per clause above.
- 21. The account books and other documents of the partnership shall be maintained in the respective place or places if carried on in more than one place and shall be in the custody of the both partners hereto and any of the partners hereto shall have the right of inspection of the accounts and shall be entitled to take copies thereof at all reasonable times.
- 22. On the closing of accounts in each year the account shall be taken of on capital assets, property effects, debts and liabilities and profit and loss of the firm and the balance sheet shall be prepared and signed by all the partners hereto and upon signature having been subscribed by the Partners hereto, be deemed to have been accepted and binding except for any manifest error that might be rectified at the instance of the partner hereto within a period of six months after such signature.
- 23. In the event of any of the partners desiring to retire for any reason whatsoever from the said partnership he shall give a previous notice in writing to that effect to the other partners and to the major creditors which shall include the bank and other financial institutions on such notice being received by the firm, the account books of the firm shall be brought up to date and the balance sheet as at the end of the period of the said notice shall be made up. The outgoing partnership shall be paid his share of the net profits as on the date of retirement and shall be required to pay all his dues or debts, if any to be paid to the firm (in case there is a loss the share of loss shall be deducted from the amount payable) and after all the claims and dues of and/or against the firm are satisfied, he shall be deemed and to be free from the partnership and the other partners shall be entitled to continue the business of the partnership in the same name.



[Handwritten signature]
 G. Chakraborty
 J. Dasgupta



-6-

24. In the event of death or insolvency of any of the partner(s) occurring during the currency of this partnership the surviving partner can admit the new partner and shall be entitled to continue and carry on the said business under the same name and style after working out and paying the dues and claims of the deceased Partner to his heirs, successors or legal representatives as the case may be who shall have full power to inspect the accounts and obtain such information as may be necessary for ascertaining that the share of the deceased has been properly worked out and paid.

25. The amount payable as stated above, to the partner or Executor or legal representative as the case may be shall become payable after the expiry of six months from the date of cessation and till that time the amount shall remain with the firm as a loan carrying interest not exceeding 12% per annum.

26. The firm shall have account with such Bank or Banks as may be decided from time to time and the Bank Account shall be operated by the Second and third partners only. However the partners shall be at liberty to alter the above mentioned power without any restriction whatsoever.

27. In all matters, the partnership shall be governed by the Indian Partnership Act 1932 or any statutory modification thereon for the time being in force.

IN WITNESS THEREOF THE PARTIES thereto have set their respective hands this day and year first above written.

WITNESS:

1. K. Chinnappa
K. Chinnappa Srinivas
S/o V. Krishnamurthy
No. 10, Old No. 4 Tank Street
Mysore, Karnataka

2. D. Veerappa
D. Veerappa S/o Dava Doss
No. 132, NALLUR MADU
MOLLA KULATHUR (POST)
T.K.M. - 603109

For MURUGAPPA BLUE METALS

[Signature]
Partner
PARTY OF THE FIRST PART

For MURUGAPPA BLUE METALS

[Signature]
Partner
PARTY OF THE SECOND PART

For MURUGAPPA BLUE METALS

[Signature]
Partner
PARTY OF THE THIRD PART



Drafted by
[Signature]
J. RAJENDRAN,
State Document Writer
Lic. No. A/ 98/98/CGL-
Singapore Rd - 603204



आयकर विभाग
INCOME TAX DEPARTMENT



भारत सरकार
GOVT. OF INDIA

R SIVAKUMAR
ARUMUGAM RAMALINGAM

14/08/1966

Permanent Account Number
AVSPS1695N

Signature



In case this card is lost / found, kindly inform / return to
Income Tax PAN Services Unit, UTTISI,
Plot No. 3, Sector 11, CBD Belapur,
Navi Mumbai - 400 614
ये कार्ड खो जाने या पाया हुआ हो, कृपया
आयकर विभाग को सूचित करें / वापस
जाने के लिए कृपया, UTTISI,
प्लॉट नं. 3, सेक्टर 11, सी.बी.डी. बेलपुर,
नवी मुंबई - 400 614

आयकर विभाग
INCOME TAX DEPARTMENT



भारत सरकार
GOVT. OF INDIA

K CHELLAMUTHU
KRISHNAN

11/01/1973

Permanent Account Number
ALJPO6244L

Signature



In case this card is lost / found, kindly inform / return to
Income Tax PAN Services Unit, UTTISI,
Plot No. 3, Sector 11, CBD Belapur,
Navi Mumbai - 400 614
ये कार्ड खो जाने या पाया हुआ हो, कृपया
आयकर विभाग को सूचित करें / वापस
जाने के लिए कृपया, UTTISI,
प्लॉट नं. 3, सेक्टर 11, सी.बी.डी. बेलपुर,
नवी मुंबई - 400 614

te.

आयकर विभाग
INCOME TAX DEPARTMENT



भारत सरकार
GOVT. OF INDIA

D NANTHAKUMAR
DEVAOORIS

18/08/1975

Permanent Account Number
ADHPN3140L

Signature



In case this card is lost / found, kindly inform / return to
Income Tax PAN Services Unit, UTTISI,
Plot No. 3, Sector 11, CBD Belapur,
Navi Mumbai - 400 614
ये कार्ड खो जाने या पाया हुआ हो, कृपया
आयकर विभाग को सूचित करें / वापस
जाने के लिए कृपया, UTTISI,
प्लॉट नं. 3, सेक्टर 11, सी.बी.डी. बेलपुर,
नवी मुंबई - 400 614

Handwritten signatures and notes:
K. Chellamuthu
D. Nanthakumar





भारतीय गैर न्यायिक

बीस रुपये

रु.20

Rs.20

TWENTY
RUPEES

INDIA

INDIA NON JUDICIAL

தமிழ்நாடு தமில்நாடு TAMIL NADU

11/7/2021

R. சிவகுமார்

குரோம்பேட்டை

92AB 063574

திரு. S. தளசேகரன்,
தந்தை தளசேகரன் விநாயகன்
உரிமம் எண் : 4536/DJ/2008
56-C/50, வ.உ.சி. தென்
புலையாடுமேடு, காஞ்சிபுரம்
தமிழ்நாடு.

பிரமாணப் பத்திரம்

2021 ஆம் ஆண்டு ஜூலை மாதம் 02 ஆம் தேதியில் செங்கல்பட்டு மாவட்டம், செங்கல்பட்டு வட்டம், திருத்தேரி சிங்கப்பெருமாள்கோவில், பகத்சிங் எண்.3 சர்வே எண்.109பி என்ற முகவரியில் இயங்கி வரும் முருகப்பா புளுமெட்டல்ஸ் என்ற நிறுவனத்தின் பங்குதாரரும் சென்னை-44 குரோம்பேட்டை லட்கமிபுரம், ராஜுவ்காந்தி 2வது தெரு, கதவு எண்.12/11 என்ற விலாசத்தில் வசித்து வரும் திரு ராமலிங்கம் குமார் ஆர்.சிவகுமார் ஆகிய தங்களுக்கு,

மேற்படி முருகப்பா புளுமெட்டல்ஸ் நிறுவன பங்குதாரரும் செங்கல்பட்டு மாவட்டம், திருக்கமுக்குன்றம் வட்டம், முள்ளிகொளத்தூர் கிராமம், 68 சட்ரஸ் மெயின்ரோடு விலாசத்தில் வசித்து வரும் திரு தேவதாஸ் குமார் D.நந்தகுமார்(1) மற்றும் மேற்படி முருகப்பா புளுமெட்டல்ஸ் நிறுவன பங்குதாரரான சென்னை-44, குரோம்பேட்டை, லட்கமிபுரம், குளக்கரை-3வது

தெரு, கதவு எண்.பழைய எண்.10, புதிய எண்.6/6 என்ற விலாசத்தில் வசித்து வரும் திரு கிருஷ்ணன் நாயக்கர் குமார் கே.செல்லமுத்து (2) ஆகிய இருவரும் எழுதிக் கொடுத்த பிரமாணப் பத்திரம் என்னவென்றால்,



B.NARAYANAN, B.Com, BL.,
ADVOCATE & NOTARY
West Tank Street,
Thirukkazhukundram Town,
Chengalpattu District - 603 109.
Mobile : 94431 53424

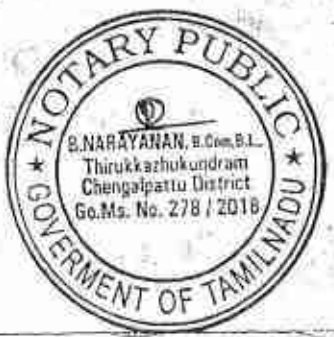
Handwritten signatures and initials.



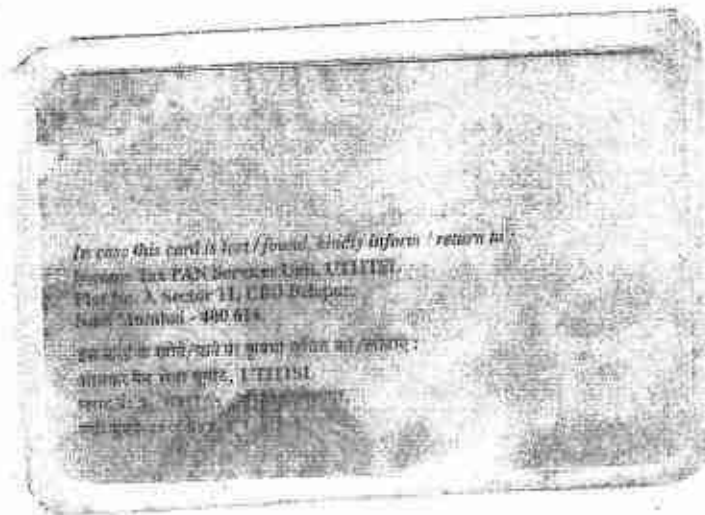
காஞ்சிபுரம் மாவட்டம், உத்திரமேரூர் வட்டம், சிறுமைலூர் கிராமம், பட்டா எண்.706, சர்வே எண்கள்:15/1(0.09.0), 15/10(0.15.0), 15/11(0.01.0), 15/12(0.05.5), 15/13A(0.02.0), 15/13B(0.03.5), 15/14(0.06.0), 15/15A(0.04.0) 15/15B(0.01.5), 15/16(0.05.0), 15/2(0.10.0), 15/3(0.03.0), 15/4(0.03.0), 15/5(0.03.0), 15/6(0.03.0), 15/7(0.14.0), 15/8(0.07.0), 15/9(0.07.5), 16/3(0.18.0), 16/6(0.06.5) ஆக 1.27.5 ஹெக்டேர் புன்செய் நிலங்கள் மற்றும் பட்டா எண்:715-இல் சர்வே எண்கள்.16/1(0.01.5), 16/2(0.01.5), 16/4(0.10.5), 16/5(0.16.5), 16/7(0.08.0) ஆக 0.38.0 ஹெக்டேர் புன்செய் நிலங்கள் ஆக மொத்தம் 1.65.5 ஹெக்டேர் (4.09ஏக்கர்) புன்செய் நிலங்களில் கல்குவாரி/மண் செய்திட நாங்களும், தாங்களும் சேர்ந்து 07-12-2012, அன்று பதிவுப் பெற்ற பத்திர எண்:2745/2012-இன்படி நமது நிறுவனமான முருகப்பா புளமெட்டல்ஸ் என்ற பெயரில் கூட்டாக கிண்டியம் பெற்றோம். மேற்படி இடத்தில் கல்குவாரி செய்திட காஞ்சிபுரம் மாவட்ட ஆட்சியர் அவர்களிடம் அனுமதி பெறுவதற்காக தங்கள் பெயரில் மட்டும் நமது மேற்படி நிறுவனத்திற்காக மனுதாக்கல் செய்துள்ளது எங்களுக்கு நன்கு தெரியும். காஞ்சிபுரம் மாவட்ட ஆட்சியர் அவர்கள் அனுமதி வழங்கிய நாளில் இருந்து 10 வருட காலத்திற்கு இந்த பிரமாணப் பத்திரம் செல்லுபடியாகும் என இதன் மூலம் மனப்பூர்வமாக சம்மதிக்கிறோம் எனவும் தாங்கள் பெயரில் மட்டும் குவாரி நடத்த மனு தாக்கல் செய்து நமது நிறுவனத்தின் பெயரில் அனுமதி பெறுவதில் எங்களுக்கு எவ்வித ஆட்சேபமையும் இல்லை என்பதைத் தெரிவித்துக் கொள்கிறோம்.

இப்படிக்கு,

[Handwritten signature]
[Handwritten signature]
[Handwritten signature]



[Handwritten signature]
B. NARAYANAN, B.Com & B.L.,
ADVOCATE & NOTARY
West Tank Street,
Thirukkazhukundram Town,
Chengalpet District - 603 109.
Mobile : 94431 53923



AS



மனிதன் அடையாள அட்டை

இந்திய அரசாங்கம்
Unique Identification Authority of India
Government of India

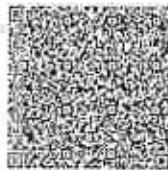
பதிவு அடையாளம் / Enrollment No.: 2007/28406/43701

To
சிவகுமார் ராமலிங்கம்
Sivakumar Ramalingam
S/O: Ramalingam
11/12 RAJIV GANDHI 2ND STREET
LAKSHMIPURAM
Thirunelveli
Chromepet
Alandur Kanchesvaram
Tamil Nadu 600044
9710062212

100870020



ML00870020FT



உங்கள் ஆதார் எண் / Your Aadhaar No. :
7127 7596 7197

ஆதார் சாதாரண மனிதனின் அதிகாரம்



இந்திய அரசாங்கம்

Government of India

சிவகுமார் ராமலிங்கம்
Sivakumar Ramalingam
தாய் : ராமலிங்கம்
Father: Ramalingam
பிறந்த நாள் / DOB: 14/08/1968
ஆண்கள் / Male



7127 7596 7197



தகவல்

- ஆதார் அடையாளத்திற்கான சான்று குடியறிமைக்கு அல்ல.
- அடையாள சான்றை இணையதளம் மூலம் உறுதிப்படுத்திக் கொள்ளவும்.

INFORMATION

- Aadhaar is proof of identity, not of citizenship.
- To establish identity, authenticate online.

- ஆதார் நாடு முழுவதிலும் செல்லுபடியாகும்.
- வருங்காலத்தில் அரசு மற்றும் அரசு சார்பு சேவைகளை பயன்படுத்திக் கொள்ள ஆதார் உதவிகரமாக இருக்கும்.
- Aadhaar is valid throughout the country.
- Aadhaar will be helpful in availing Government and Non-Government services in future.



ஆதார் முகவு

S/O: ராமலிங்கம், 11/12, ராஜீவ் காந்தி 2ஆவது தெரு. வட கரடும, திருநெல்லை, கோவை, தமிழ்நாடு, சோழி

செய்தலுக்கான அடையாள அட்டை

Unique Identification Authority of India

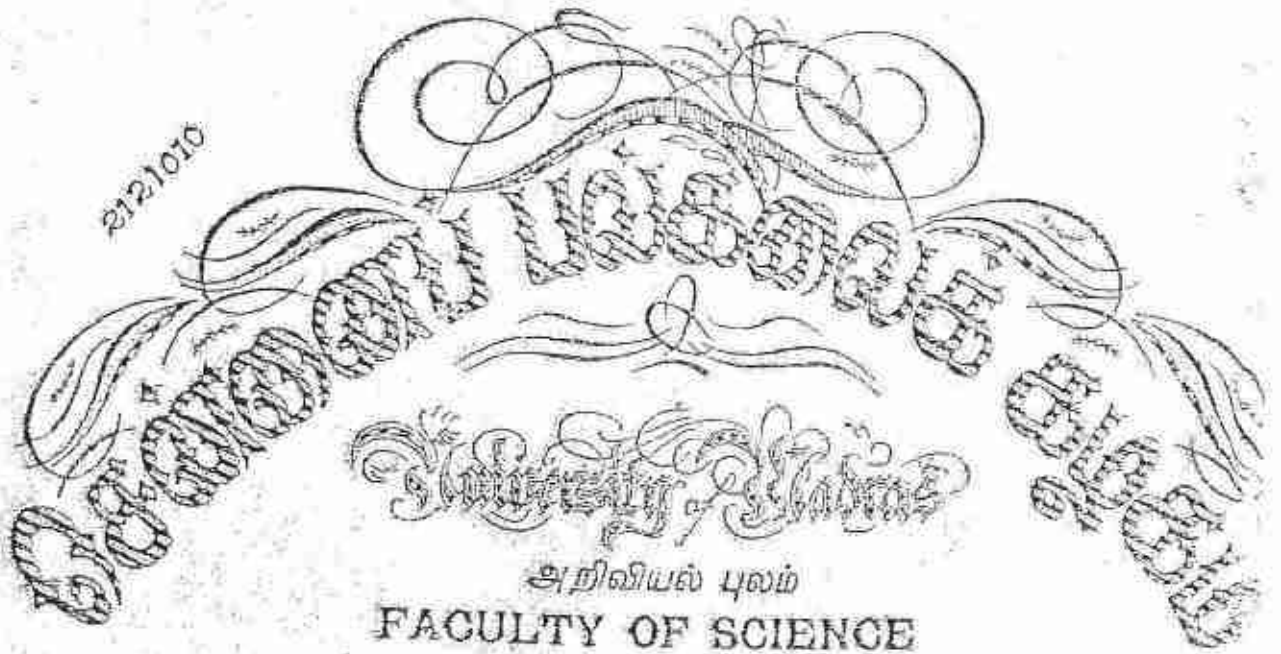
Address

S/O: Ramalingam, 11/12, RAJIV GANDHI 2ND STREET, LAKSHMIPURAM, Thirunelveli, Chromepet, Kanchesvaram, Tamil Nadu, 600044

ANNEXURE



7127 7596 7197



சென்னைப் பல்கலைக் கழகப் பரீட்சை 1994

ஆண்டு..... இப்பகுதி..... மாற்றம் நடந்த கல்விக்கல்வித் துறை.....
..... விப. தங்கராசு..... சம்பளம்..... செ.தல்..... வகுப்பில்
இவ்வாறு உபநாமா என்று தக்க இவ்வாறானால் சான்றுக்குட்பட்ட அறிவியல் நிறைவு
எனவும் பட்டத்தை அவருக்குப் பல்கலைக் கழக இலக்கணப்படி எ வழங்குகிறது.

The Senate of the UNIVERSITY OF MADRAS hereby makes known that..... P. Sranganesan.....
has been admitted to the Degree of Master of Science, to be
having been certified by duly appointed Examiners to be qualified
to receive the same in..... Geology..... and was placed in the
..... First..... Class, at the Examination held in April 1994



Given under the seal of the University

சென்னை, சென்னை
சென்னை, சென்னை
25-01-1994

100 A

P. T. Srinivasan
சென்னை




GOVERNMENT OF INDIA
MINISTRY OF LABOUR AND REHABILITATION
OFFICE OF THE DIRECTOR GENERAL OF MINES SAFETY

Certificate of Practical experience granted by the Manager to a candidate for a Manager's / Surveyor's / Foreman's / Overman's / Sirdar's / Mate's / Short Shift's Blaster's Certificate of competency (Restricted) examination under the Metalliferous Mines Regulations 1961.

I T.VENKATARAJAGOPALAN being the Mines Agent of M/S.LIMENAPH CHEMICALS, RAJAPALAYAM OF LIMESTONE PRODUCTS (Thenmal Limestone Mine) do hereby certify that Thiru P.THANGARAJU, son of S.PERIASAMY (whose signature is appended) worked as a Geologist in the above mine from 02.05.1994 to 30.12.1999. During his term of work aforesaid, he has obtained practical experience as detailed overleaf. The duties connected with his work have involved continuous attendance at the mine and have been efficiently performed by him.

I believe him to be of good character and a fit and proper candidate to be examined for Certificate of Competency.

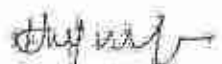

10/6/96
(Signature with date and official Seal)
[T.VENKATARAJAGOPALAN]

Mines Agent:

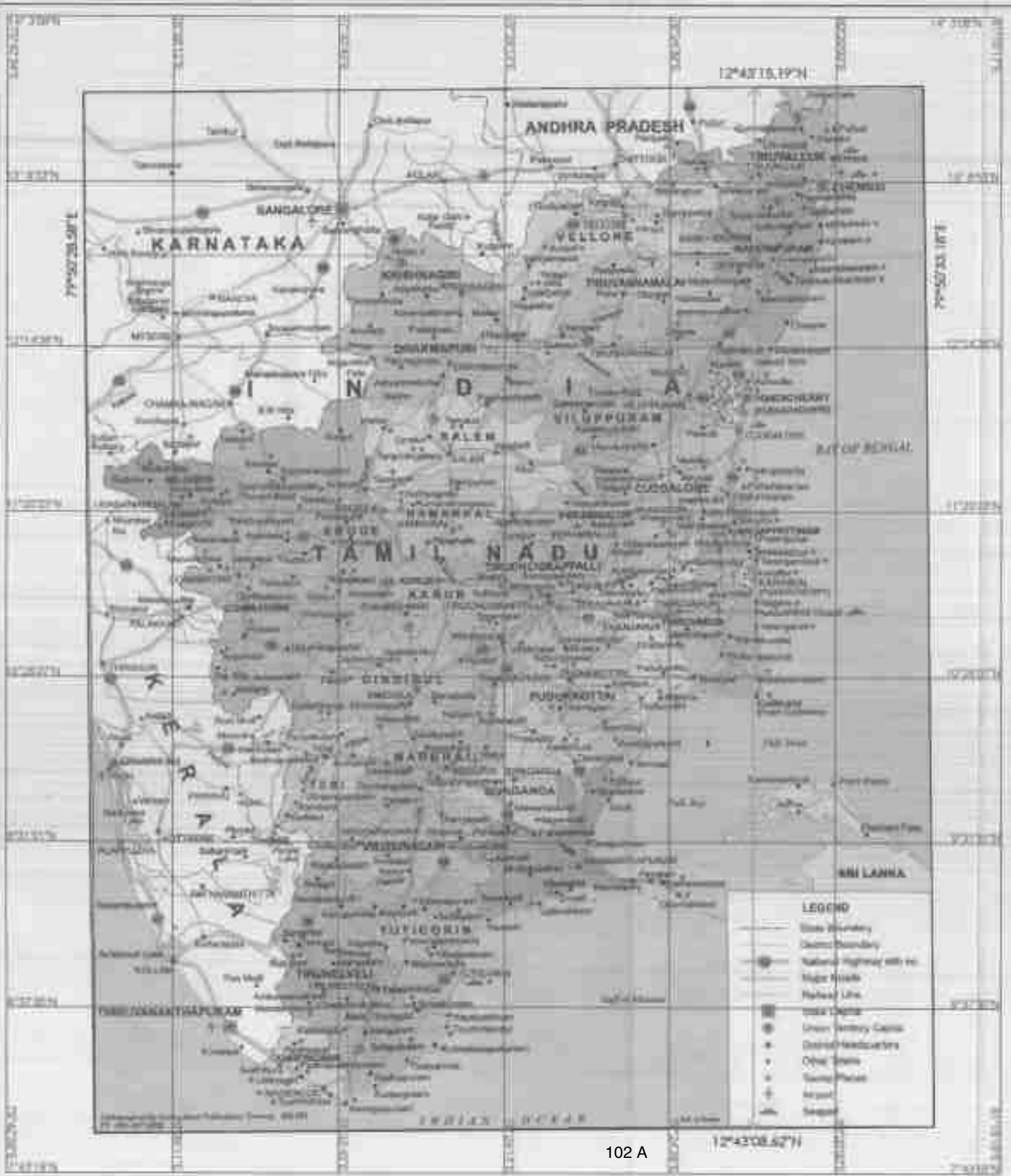
P.O. : ARUKANGULAM

District : TIRUNELVELI

State : TAMILNADU


(Signature of Candidate)

(State name of Mineral) : LIMESTONE



INDEX

Q.L. APPLIED AREA: ●

TOPO SHEET NO. : 57 P/14

LATITUDE : 12°42'08.52"N to 12°42'15.19"N
LONGITUDE : 77°50'28.58"E to 77°50'33.18"E

APPLICANT :

M. MURUGAPPA BLUE METALS
PARTNER TH. S. SVAKUMAR
1/G. EAMAUNGAM,
No.3, BHAGAVATINGH NAGAR,
THIRUHERI, SINGAMPALAI KOIL,
CHENGALPATTU TALUK,
CHENGALPATTU DISTRICT - 603 204

LOCATION OF Q.L.A. AREA:

S.F. NO. : 15/1(PL) (P), 49C & 1A/1, 2, 49C,
EXTENT : 1.37 AC. HQ.
VILLAGE : SIRMAILOUR,
TALUK : UTHIRAMERUR,
DISTRICT : KANCHIPEURAM,
STATE : TAMIL NADU.

PLATE NO - I

DATE OF SURVEY : 30.11.2022

LOCATION PLAN

SCALE : 1:24,00,000

PREPARED BY :

THIS IS TO CERTIFY THAT THE INFORMATION IN THIS
PLAN IS TRUE AND CORRECT TO THE BEST OF MY
KNOWLEDGE BASED UPON THE LEASE MAP
AUTHENTICATED BY STATE GOVERNMENT

(Signature)
S. S. SIVAKUMAR
SPECIALIST

INDEX



- _____ Express highway with cut; with bridge; with drainage canal.
- _____ Road, double cartway, according to importance.
- _____ Unsurfaced road. Cart road. Pack track with pass. Fire path.
- _____ Boundary wall with or without ditch.
- _____ Drain: masonry or rock filled; with or without.
- _____ River, dry with wear channel; with island & rocks. Tidal river.
- _____ Intermittent water. Stream. Swamp. Marsh.
- _____ Well: dug; shaft. Tubewell. Spring. Tank. Perennial.
- _____ Embankment: road or rail; tank. Shelter ground.
- _____ Railway, broad gauge; double; single with station.
- _____ Railway, meter gauge; double; single with distance marker; in island; sea or railway. Ebb. Cutting with tunnel.
- _____ Cemetery with sub-tombstones. Rocky slopes. Cliff.
- _____ Sand dunes. (1) flat. (2) sand hills (perennial).
- _____ Trees or Village: isolated; forested. Forest.
- _____ Deer preserve; impoundment. Tower. Jetty.
- _____ Temple. Church. Chara. Mosque. Light. Tank. Grove.
- _____ Lighthouse. Lightship. Beacon. Lighted. Signalpost. Aeronautic.
- _____ Mine. Vye or mine. Open. Shaft.
- _____ Fossil. Railway. Mine. Fossil. Coal. Barren. Other uses.
- _____ Area: cultivated. Wooded. Surveyed area.
- _____ Boundary: unenclosed.
- _____ Boundary: with dimensions; unenclosed.
- _____ Boundary: double; with or without; wall or tank; fence.
- _____ Boundary: pillars; unenclosed; enclosed.
- _____ Height: measured; above sea level; approximate.
- _____ Bench mark: public; survey; road.
- _____ Fire office. Telegraph office. Postoffice.
- _____ Red house or inspection bungalow. Club house.
- _____ Camping ground. Forest: reserved; protected.
- _____ Name: name: administrative; locality or place.
- _____ Hospital. Dispensary. Veterinary. Hospital. Dispensary.
- _____ Ambulance. Hospital. Transit camp.
- _____ Frontier: with pillars; unenclosed; with pillars; unenclosed.




APPLICANT :
 THE MURUGAPPA BLUE METALS,
 PARTNER TNU, E. SIVAKUMAR,
 S/O. RAMALINGAM,
 NO.3, BHAGAVATISINGH NAGAR,
 THIRUTHURAI SINGAMPURMAL KOIL,
 CHENGALPATTU TALUK & DISTRICT - 602 204.

LOCATION OF Q.L.A. AREA:
 S.E. NOS : 15/1(P) 2(P), etc. & 16/1,2, etc.,
 EXTENT : 1.39.61 Hc.
 VILLAGE : SRUMAILOUR,
 TALUK : UTHIRAMERUR,
 DISTRICT : KANCHI PURAM,
 STATE : TAMIL NADU.

PLATE NO - I-A
 DATE OF SURVEY : 30.11.2022

**TOPO SKETCH OF QUARRY LEASE
 APPLIED AREA FOR 10Km RADIUS**
 SCALE: 1:11,00,000

TOPO SHEET NO. : 57 P/14
 LATITUDE : 12°43'08.62"N to 12°43'15.19"N
 LONGITUDE : 79°50'28.58"E to 79°50'33.16"E
 10km RADIUS : 
 Q.L. APPLIED AREA : 

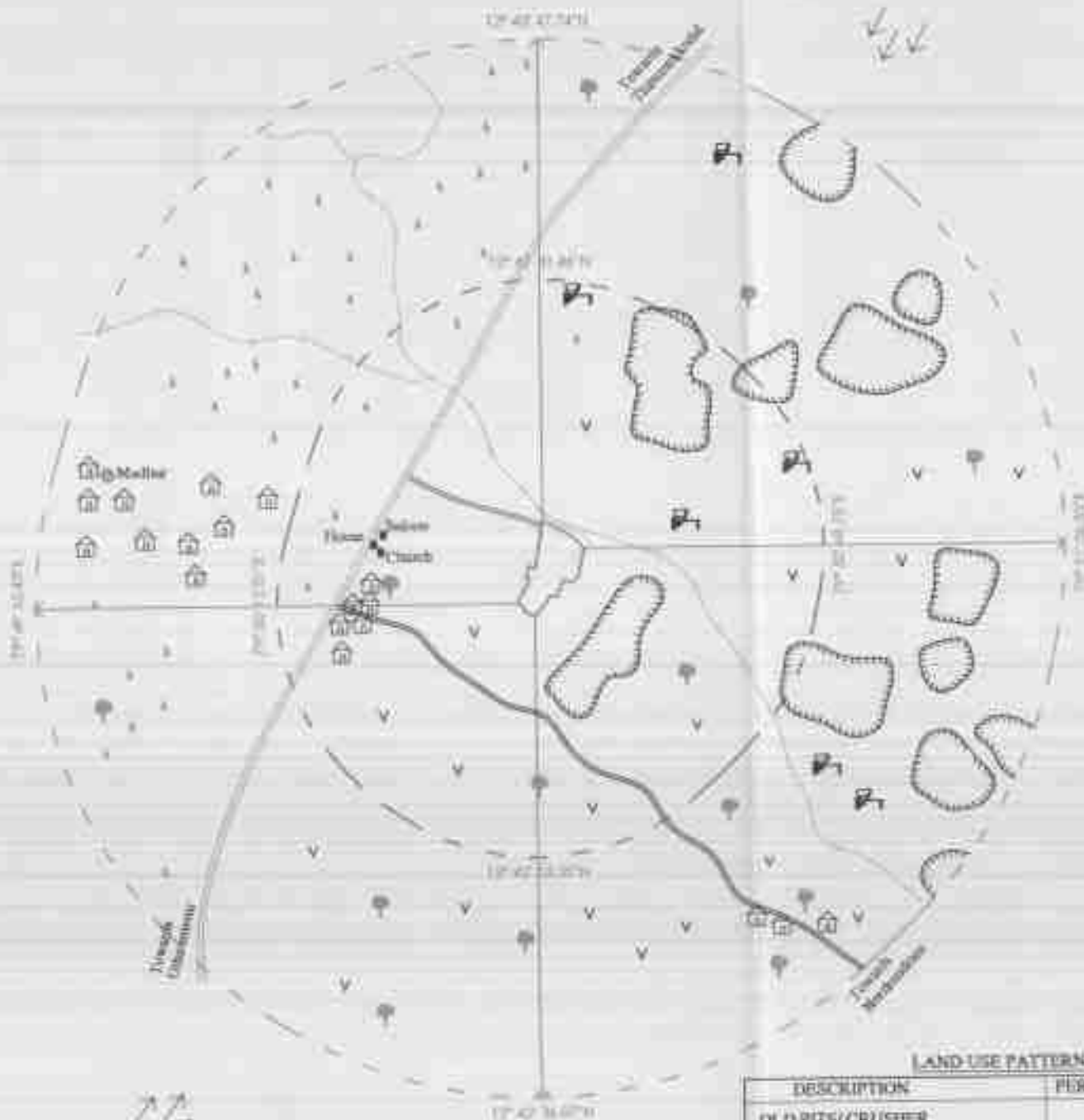
PREPARED BY:
 THIS IS TO CERTIFY THAT THE INFORMATION IN THIS
 PLAN IS TRUE AND CORRECT TO THE BEST OF MY
 KNOWLEDGE BASED UPON THE LEASE MAP
 AUTHENTICATED BY STATE GOVERNMENT.

 S.P. THANGARAJ, M.S.P.N.C.,
 CHIEF OF PARTY

INDEX



-  Q.L. APPLIED AREA
-  1 KM RADIUS
-  500m RADIUS
-  SEASONAL AGRICULTURE LAND
-  TREES
-  HABITATION
-  WIND DIRECTION
-  MAJOR DISTRICT ROAD
-  APPROACH ROAD
-  QUARRY PIT & CRUSHER
-  BARREN LAND
-  ODAI & TANK
-  CART TRACK

OCTOBER TO DECEMBER



JULY TO SEPTEMBER

TOPO SHEET NO. SF P14
 (ASSISE : 12°43'00"N to 12°45'15"N
 LONGITUDE : 77°00'00"E to 77°03'00"E)

LAND USE PATTERN

DESCRIPTION	PERCENTAGE	INDEX
OLD PITS/CRUSHER	(05%)	OP
TREES	(05%)	T
ROADS	(02%)	R
HABITATION	(04%)	H
AGRICULTURE LAND	(21%)	A
BARREN LAND	(19%)	V V
WATER BODIES	(10%)	W
TOTAL	100%	

APPLICANT :

M. MURUGAPPA BLUE METALS
 PARTNER THRU P. SVAKUMAR,
 S/o. RAMALINGAM,
 NO.3, BHAGAVATISHAH NAGAR,
 THIRUTHURAI, SINGAMPURAM KOL,
 CHENGALPATTU TALUK & DISTRICT - 600 204.

LOCATION OF Q.L.A. AREA:

S.F. Nos : 15/1(P),2(P) etc & 16/1,2, etc.
 EXTENT : 1.24-81 Ha.
 VILLAGE: DEEMALDUR,
 TALLUK : UTHIRAMERUR,
 DISTRICT : KANCHIESTURAM,
 STATE : TAMIL NADU.

PLATE NO - I-B

DATE OF SURVEY : 30.11.2022

ENVIRONMENTAL & LAND USE PLAN

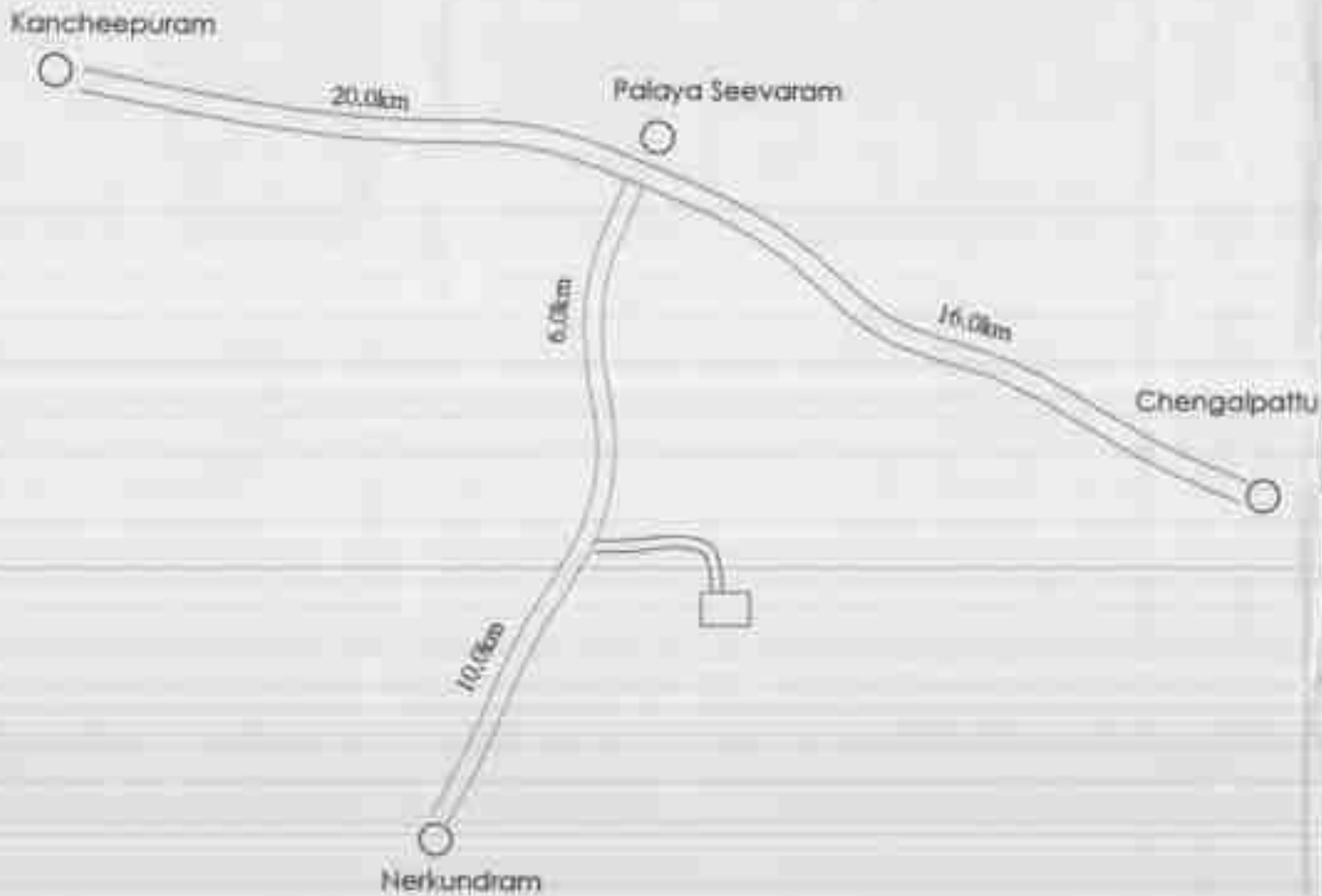
SCALE : 1:10,000

PREPARED BY:

THIS IS TO CERTIFY THAT THE INFORMATION ON THIS
 PLATE IS TRUE AND CORRECT TO THE BEST OF MY
 KNOWLEDGE BASED UPON THE LEASE MAP
 AUTHENTICATED BY STATE GOVERNMENT

Srinivasan
 S.P. SANKARANARAYANAN, P.E.
 SURVEY OFFICER

PLATE NO : I-C
ROUTE MAP



<p style="text-align: center;"><u>INDEX</u></p> <p>LEASE AREA </p> <p>NATIONAL HIGHWAY </p> <p>MAJOR DISTRICT ROAD </p> <p>APPROACH ROAD </p>	<p><u>APPLICANT :</u></p> <p>Mr. MURLIGAPPA BLUE METALS, PARTNER Thiru. R. SIVAKUMAR, S/o. RAMALINGAM, No.3, BHAGAVATSINGH NAGAR, THIRUTHERI, SINGAMPURUM TALUK, CHENGALPATTU DISTRICT-603 204.</p> <p><u>LOCATION OF Q.L.A. AREA:</u></p> <p>S.F.NoS : 15/1(P), 2(P) etc. & 16/1, 2, etc..</p> <p>EXTENT : 1.39.81 Ha, VILLAGE : SIRUMAILOUR, TALUK : UTHIRAMERUR, DISTRICT : KANCHEEPURAM, STATE : TAMIL NADU.</p>	<p><u>SCALE:</u> NOT TO SCALE</p> <p><u>PREPARED BY:</u></p> <p style="text-align: center;"> Dr. P. THANGARAJ, M.Sc, Ph.D., QUALIFIED PERSON </p> <p style="font-size: small;">THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE BASED UPON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.</p>
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SITE SURVEYOR (Proposed)	
A	10/11/2024
B	10/11/2024
C	10/11/2024
D	10/11/2024
E	10/11/2024
F	10/11/2024

INDEX	
	Q.L. APPLIED AREA BOUNDARY
	10m & 7.5m SAFETY DISTANCE
	TEMPORARY BENCH MARK
	GRAVE
	ROUGHSTONE
	STONE & DIP
	SHELLS
	QUARRY HAUL ROAD
	APPROACH ROAD
	DEPTH OF ESTIMATION
	ODM

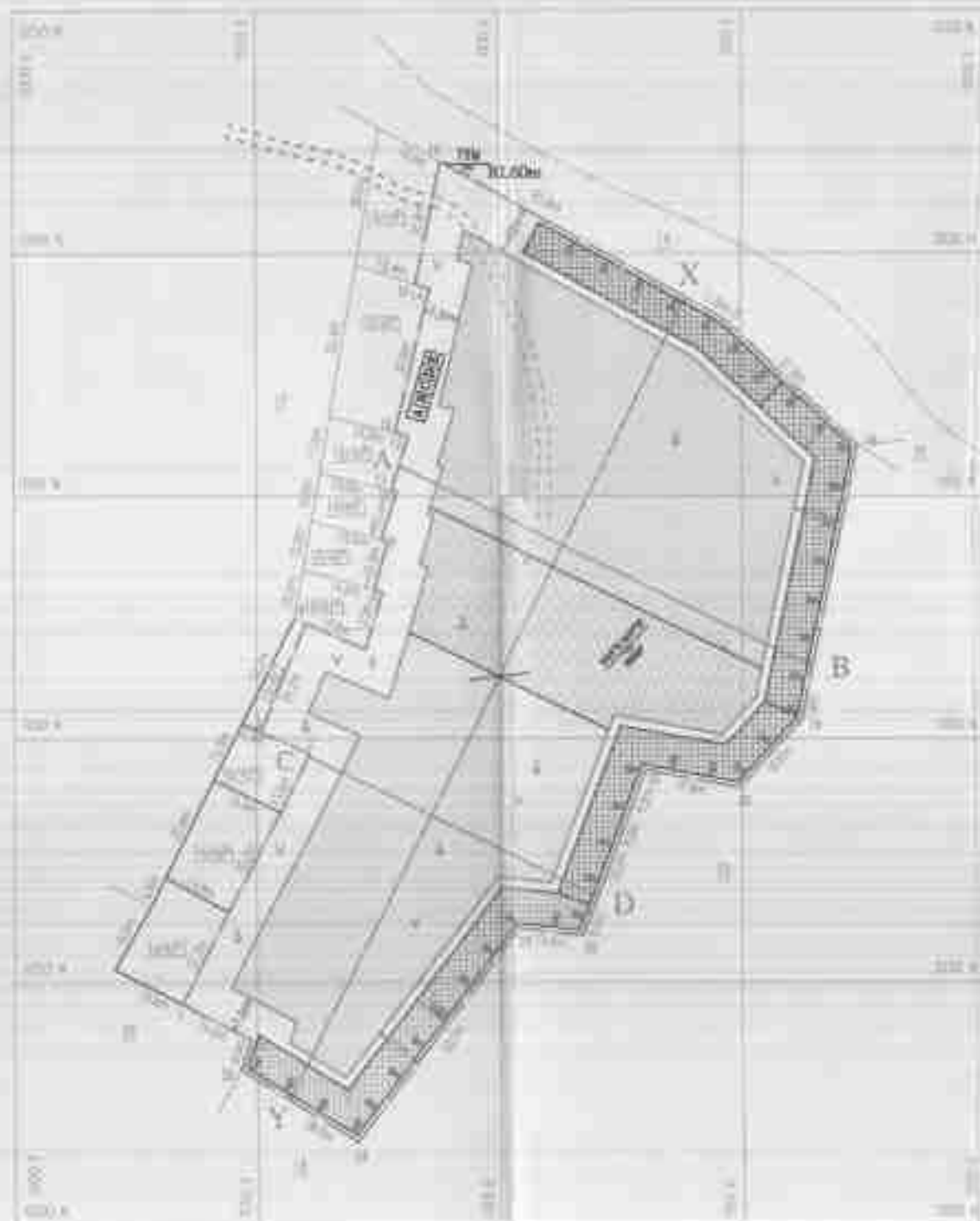
APPLICANT :
 M. MURUGAPPA SUE-METALS
 PARTNER THIRU.E. SVAKUMAR
 S/O. RAMALINGAM,
 No.3, BHAGAVATISINGH NAGAR,
 THIRUTHIRU. SIVAMPERUMAL KOIL,
 CHENGALPATTU TALUK,
 CHENGALPATTU DISTRICT - 602 204.

LOCATION OF Q.L.A. AREA:
 S.F.NoS : 15/1(P),2(P), etc & 16/1,2, etc.
 EXTENT : 1.39.61 Ha.
 VILLAGE : SRIMALAIKUR,
 TALUK : UTHIRAMERUR,
 DISTRICT : KANCHIPEPURAM,
 STATE : TAMIL NADU.

PLATE NO - III-A
 DATE OF SURVEY : 30.11.2022
**TOMOGRAPHY, GEOLOGICAL PLAN,
 FIRST FIVE YEARWISE
 DEVELOPMENT & PRODUCTION
 PLAN & SECTIONS**
 SCALE: 1:1000

PREPARED BY:
 THIS IS TO CERTIFY THAT THE INFORMATION IN THIS
 PLAN IS TRUE AND CORRECT TO THE BEST OF MY
 KNOWLEDGE BASED UPON THE LEGAL MAP
 AUTHENTICATED BY STATE GOVERNMENT.

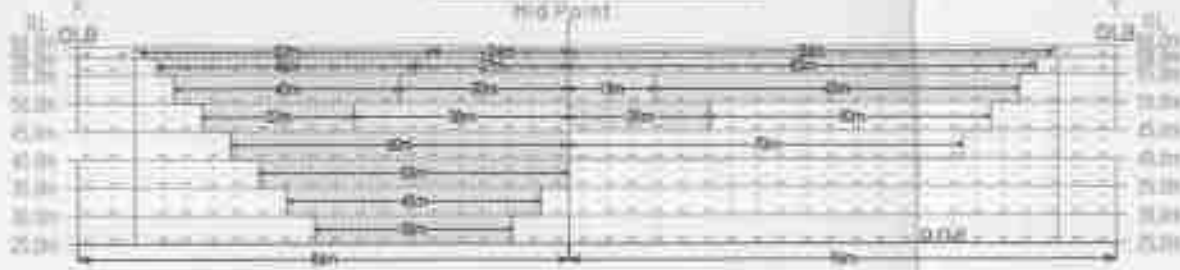
 M. MURUGAPPA SUE-METALS,
 QUALIFIED PERSON



BOUNDARY COORDINATES		
S.N.	LATITUDE	LONGITUDE
1	12°42'21.24N	77°32'54.81E
2	12°42'13.24N	77°32'54.81E
3	12°42'11.50N	77°32'52.11E
4	12°42'12.07N	77°32'52.02E
5	12°42'11.92N	77°32'52.07E
6	12°42'12.07N	77°32'52.07E
7	12°42'12.24N	77°32'52.02E
8	12°42'12.41N	77°32'52.07E
9	12°42'12.58N	77°32'52.12E
10	12°42'12.75N	77°32'52.17E
11	12°42'12.92N	77°32'52.22E
12	12°42'13.09N	77°32'52.27E
13	12°42'13.26N	77°32'52.32E
14	12°42'13.43N	77°32'52.37E
15	12°42'13.60N	77°32'52.42E
16	12°42'13.77N	77°32'52.47E
17	12°42'13.94N	77°32'52.52E
18	12°42'14.11N	77°32'52.57E
19	12°42'14.28N	77°32'52.62E
20	12°42'14.45N	77°32'52.67E
21	12°42'14.62N	77°32'52.72E
22	12°42'14.79N	77°32'52.77E
23	12°42'14.96N	77°32'52.82E
24	12°42'15.13N	77°32'52.87E
25	12°42'15.30N	77°32'52.92E
26	12°42'15.47N	77°32'52.97E
27	12°42'15.64N	77°32'53.02E
28	12°42'15.81N	77°32'53.07E
29	12°42'15.98N	77°32'53.12E
30	12°42'16.15N	77°32'53.17E
31	12°42'16.32N	77°32'53.22E
32	12°42'16.49N	77°32'53.27E
33	12°42'16.66N	77°32'53.32E
34	12°42'16.83N	77°32'53.37E
35	12°42'17.00N	77°32'53.42E
36	12°42'17.17N	77°32'53.47E
37	12°42'17.34N	77°32'53.52E
38	12°42'17.51N	77°32'53.57E
39	12°42'17.68N	77°32'53.62E
40	12°42'17.85N	77°32'53.67E
41	12°42'18.02N	77°32'53.72E
42	12°42'18.19N	77°32'53.77E
43	12°42'18.36N	77°32'53.82E
44	12°42'18.53N	77°32'53.87E
45	12°42'18.70N	77°32'53.92E
46	12°42'18.87N	77°32'53.97E
47	12°42'19.04N	77°32'54.02E
48	12°42'19.21N	77°32'54.07E
49	12°42'19.38N	77°32'54.12E
50	12°42'19.55N	77°32'54.17E
51	12°42'19.72N	77°32'54.22E
52	12°42'19.89N	77°32'54.27E
53	12°42'20.06N	77°32'54.32E
54	12°42'20.23N	77°32'54.37E
55	12°42'20.40N	77°32'54.42E
56	12°42'20.57N	77°32'54.47E
57	12°42'20.74N	77°32'54.52E
58	12°42'20.91N	77°32'54.57E
59	12°42'21.08N	77°32'54.62E
60	12°42'21.25N	77°32'54.67E
61	12°42'21.42N	77°32'54.72E
62	12°42'21.59N	77°32'54.77E
63	12°42'21.76N	77°32'54.82E
64	12°42'21.93N	77°32'54.87E
65	12°42'22.10N	77°32'54.92E
66	12°42'22.27N	77°32'54.97E
67	12°42'22.44N	77°32'55.02E
68	12°42'22.61N	77°32'55.07E
69	12°42'22.78N	77°32'55.12E
70	12°42'22.95N	77°32'55.17E
71	12°42'23.12N	77°32'55.22E
72	12°42'23.29N	77°32'55.27E
73	12°42'23.46N	77°32'55.32E
74	12°42'23.63N	77°32'55.37E
75	12°42'23.80N	77°32'55.42E
76	12°42'23.97N	77°32'55.47E
77	12°42'24.14N	77°32'55.52E
78	12°42'24.31N	77°32'55.57E
79	12°42'24.48N	77°32'55.62E
80	12°42'24.65N	77°32'55.67E
81	12°42'24.82N	77°32'55.72E
82	12°42'24.99N	77°32'55.77E
83	12°42'25.16N	77°32'55.82E
84	12°42'25.33N	77°32'55.87E
85	12°42'25.50N	77°32'55.92E
86	12°42'25.67N	77°32'55.97E
87	12°42'25.84N	77°32'56.02E
88	12°42'26.01N	77°32'56.07E
89	12°42'26.18N	77°32'56.12E
90	12°42'26.35N	77°32'56.17E
91	12°42'26.52N	77°32'56.22E
92	12°42'26.69N	77°32'56.27E
93	12°42'26.86N	77°32'56.32E
94	12°42'27.03N	77°32'56.37E
95	12°42'27.20N	77°32'56.42E
96	12°42'27.37N	77°32'56.47E
97	12°42'27.54N	77°32'56.52E
98	12°42'27.71N	77°32'56.57E
99	12°42'27.88N	77°32'56.62E
100	12°42'28.05N	77°32'56.67E

MAPS - UTM ZONE 48 NORTH

SECTION ALONG X-Y

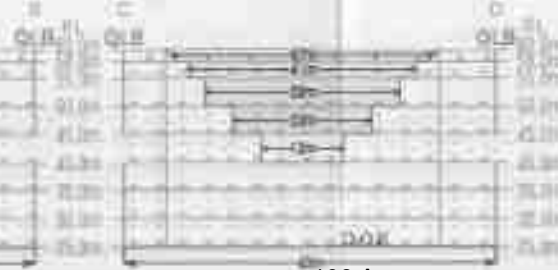


I - yr Proposed area to be Quarried	
II - yr Proposed area to be Quarried	
III - yr Proposed area to be Quarried	
IV - yr Proposed area to be Quarried	
V - yr Proposed area to be Quarried	

SECTION ALONG A-B



SECTION ALONG C-D



I - yr Proposed area to be Quarried	
II - yr Proposed area to be Quarried	
III - yr Proposed area to be Quarried	
IV - yr Proposed area to be Quarried	
V - yr Proposed area to be Quarried	



SITE SERVICES	
1	WATER
2	SEWERAGE
3	ELECTRICITY
4	TELEPHONE
5	ROAD
6	RAILROAD

INDEX	
	Q.L. APPLIED AREA BOUNDARY
	10m & 7.5m SAFETY DISTANCE
	TEMPORARY BENCH MARK
	GRAVEL
	ROUGHSTONE
	STRIKE & DIP
	QUARRY PIT
	SHALES
	QUARRY HAUL ROAD
	APPROACH ROAD
	CANAL
	5m x 5m PLANTATION

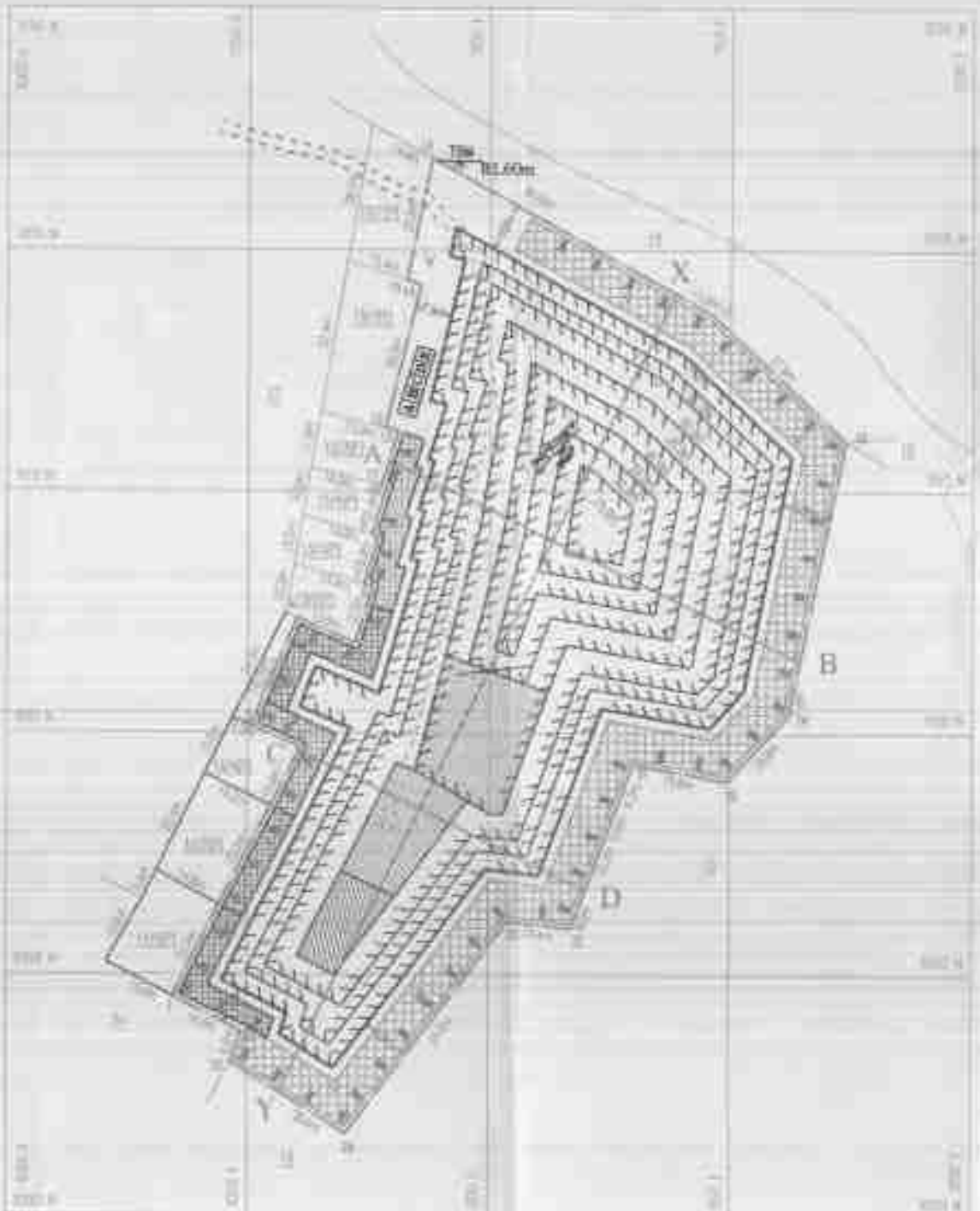
APPLICANT:
 M. MURUGAPPA BLUE METALS,
 PARTNER THIRUJ. SVAKUMAR,
 S/O. RAMALINGAM,
 No.3, BHAGAVATISINGH NADAK,
 THIRUTHURAI, SINGAMPURAI VOL,
 CHENGALFATTU TALUK,
 CHENGALFATTU DISTRICT - 602 204.

LOCATION OF Q.L.A. AREA:
 S.F. NO. : 13/1(P) 2(P), etc. & 14/1.2, etc.
 EXTENT : 1.39/81 Ha.
 VILLAGE : SRUMAILOUR,
 TALUK : UTHIRAMERURU,
 DISTRICT : KANCHI PURAM,
 STATE : TAMIL NADU.

PLATE NO - III-B
 DATE OF SURVEY : 30.11.2022
**TOPOGRAPHY, GEOLOGICAL PLAN,
 SECOND FIVE YEARWISE
 DEVELOPMENT & PRODUCTION
 PLAN & SECTIONS**
 SCALE: 1:1000

PREPARED BY:
 I hereby certify that the information in this
 plan is true and correct to the best of my
 knowledge based upon the least map
 authenticated by State Government

M. Murugappa
 S/O. MURUGAPPA S/O. P. N.
 QUALIFIED PERSON



BOUNDARY CO-ORDINATE

Sl. No.	W. B. CO-ORDINATE	E. B. CO-ORDINATE
1	17° 48' 00.00"	77° 30' 00.00"
2	17° 48' 11.00"	77° 30' 00.00"
3	17° 48' 11.00"	77° 30' 00.00"
4	17° 48' 11.00"	77° 30' 00.00"
5	17° 48' 11.00"	77° 30' 00.00"
6	17° 48' 11.00"	77° 30' 00.00"
7	17° 48' 11.00"	77° 30' 00.00"
8	17° 48' 11.00"	77° 30' 00.00"
9	17° 48' 11.00"	77° 30' 00.00"
10	17° 48' 11.00"	77° 30' 00.00"
11	17° 48' 11.00"	77° 30' 00.00"
12	17° 48' 11.00"	77° 30' 00.00"
13	17° 48' 11.00"	77° 30' 00.00"
14	17° 48' 11.00"	77° 30' 00.00"
15	17° 48' 11.00"	77° 30' 00.00"
16	17° 48' 11.00"	77° 30' 00.00"
17	17° 48' 11.00"	77° 30' 00.00"
18	17° 48' 11.00"	77° 30' 00.00"
19	17° 48' 11.00"	77° 30' 00.00"
20	17° 48' 11.00"	77° 30' 00.00"
21	17° 48' 11.00"	77° 30' 00.00"
22	17° 48' 11.00"	77° 30' 00.00"
23	17° 48' 11.00"	77° 30' 00.00"
24	17° 48' 11.00"	77° 30' 00.00"
25	17° 48' 11.00"	77° 30' 00.00"
26	17° 48' 11.00"	77° 30' 00.00"
27	17° 48' 11.00"	77° 30' 00.00"
28	17° 48' 11.00"	77° 30' 00.00"
29	17° 48' 11.00"	77° 30' 00.00"
30	17° 48' 11.00"	77° 30' 00.00"

DATUM : 1974 MEAN SEA LEVEL

SECTION ALONG X-Y

Proposed Pit Dimension (max)
 = 154m x 76m x 35m (l)
 (For 1 to V-yr)

VI - yr Proposed area to be Quarried	
VII - yr Proposed area to be Quarried	
VIII - yr Proposed area to be Quarried	
IX - yr Proposed area to be Quarried	
X - yr Proposed area to be Quarried	

SECTION ALONG A-B

SECTION ALONG C-D

VI - yr Proposed area to be Quarried	
VII - yr Proposed area to be Quarried	
VIII - yr Proposed area to be Quarried	
IX - yr Proposed area to be Quarried	
X - yr Proposed area to be Quarried	

INDEX



- Q.L. APPLIED AREA BOUNDARY
- 10m & 7.5m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- DRAVEL
- ROUGHSTONE
- STAKE & DIP
- QUARRY PIT
- SHRUB
- QUARRY HAUL ROAD
- APPROACH ROAD
- ODA
- 4x4 PLANTATION
- 6x6 PLANTATION
- BARBED WIRE FENCING
- PROPOSED GARLAND DRAIN
- EXISTING LAND FORM
- SOIL LAYER
- REHABILITATED LAND FORM
- OLD SURFACE LEVEL
- FINISHED SURFACE LEVEL
- RAIN WATER STORAGE

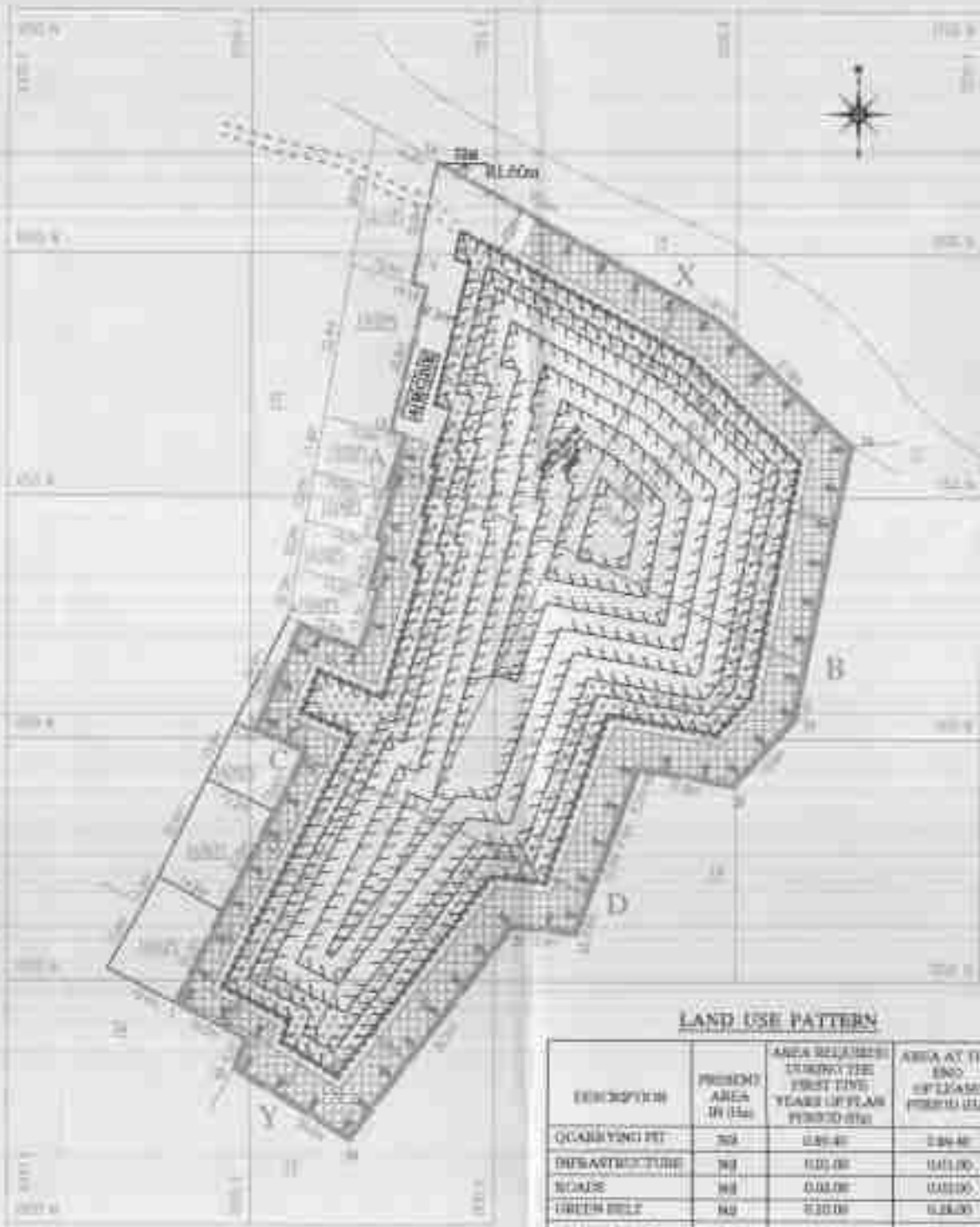
SOIL SERVICES

1. SOIL
2. ROCK WITH
3. FINEST SAND
4. SILT
5. CLAY
6. SAND

BOUNDARY COORDINATES

SL. NO.	LATITUDE	LONGITUDE
1	12° 47' 05.64"	77° 52' 28.85"
2	12° 47' 11.27"	77° 52' 28.85"
3	12° 47' 13.87"	77° 52' 28.85"
4	12° 47' 12.27"	77° 52' 28.85"
5	12° 47' 11.87"	77° 52' 28.85"
6	12° 47' 13.27"	77° 52' 28.85"
7	12° 47' 13.27"	77° 52' 28.85"
8	12° 47' 12.67"	77° 52' 28.85"
9	12° 47' 13.67"	77° 52' 28.85"
10	12° 47' 13.97"	77° 52' 28.85"
11	12° 47' 12.97"	77° 52' 28.85"
12	12° 47' 13.37"	77° 52' 28.85"
13	12° 47' 13.77"	77° 52' 28.85"
14	12° 47' 13.77"	77° 52' 28.85"
15	12° 47' 14.17"	77° 52' 28.85"
16	12° 47' 14.17"	77° 52' 28.85"
17	12° 47' 14.57"	77° 52' 28.85"
18	12° 47' 14.57"	77° 52' 28.85"
19	12° 47' 14.97"	77° 52' 28.85"
20	12° 47' 14.97"	77° 52' 28.85"
21	12° 47' 15.37"	77° 52' 28.85"
22	12° 47' 15.37"	77° 52' 28.85"
23	12° 47' 15.77"	77° 52' 28.85"
24	12° 47' 15.77"	77° 52' 28.85"
25	12° 47' 16.17"	77° 52' 28.85"
26	12° 47' 16.17"	77° 52' 28.85"

DATUM : UTM-NAD83, ZONE 48 NORTH



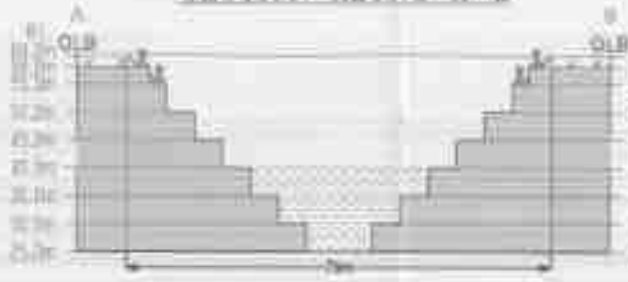
LAND USE PATTERN

DESCRIPTION	PROMPT AREA IN (Ha)	AREA RELEASED DURING THE FIRST FIVE YEARS OF PLAN PERIOD (Ha)	AREA AT THE END OF FIVE YEARS PERIOD (Ha)
QUARRYING PIT	200	0.0000	0.0000
INFRASTRUCTURE	00	0.0000	0.0000
ROADS	00	0.0000	0.0000
GREEN BELT	00	0.0000	0.0000
UNUTILIZED AREA	1.3681	0.2741	0.1941
TOTAL	1.3681	1.3681	1.3681

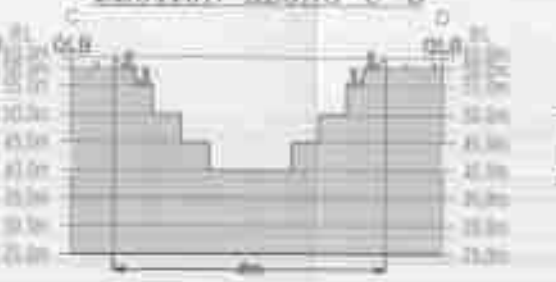
SECTION ALONG X-Y



SECTION ALONG A-B



SECTION ALONG C-D



Proposed Pit Dimension (max) = 164m X 70m X 23m (d)

APPLICANT:

M. MURUGAPPA BLUE METALS,
PARTNER THRU R. SVAKUMAR,
V/O. SAMALINGAM,
No.3, BHAGAVATISINGH NAGAR,
THIRUTHURAI, SINGAMPURAM TALUK,
CHENGALPATTU TALUK,
CHENGALPATTU DISTRICT - 603 204.

LOCATION OF Q.L.A. AREA:

S.F.No. : 18/1(P)3/Pl-III & 1A/1,2 etc.
EXTENT : 1.3681 Ha.
VILLAGE : SIRMALINGUR,
TALUK : LITHRAMELUR,
DISTRICT : KANCHEEPURAM,
STATE : TAMIL NADU.

PLATE NO - IV

DATE OF SURVEY : 30-11-2022

PROGRESSIVE QUARRY CLOSURE PLAN & SECTIONS

SCALE : 1:1000

PREPARED BY:

THE ENGINEER CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF HIS KNOWLEDGE BASED UPON THE BEST MAP AUTHENTICATED BY STATE GOVERNMENT

S. Prasad
S.P. THIRUMALAI & CO., P.L.
SURVEYORS



SITE SERVICES	
A	LEADLINE
B	20'x40' WASH
C	1000'x100' M
D	WATER SOURCE
E	20'x20'
F	20'x10'x20'



INDEX	
	Q.L. APPLIED AREA BOUNDARY
	20m & 7.5m SAFETY DISTANCE
	TEMPORARY BENCHMARK
	GRAVEL
	ROUGHSTONE
	STRIKE & DIP
	QUARRY PIT
	DRIVE
	QUARRY HAUL ROAD
	APPROACH ROAD
	ODM
	HV Yr PLANTATION
	VLX Yr PLANTATION

APPLICANT :
 M. MURUGAPPA BLUE METAL
 PARTNER THIRU. SIVASUBAR
 S/O. RAMALINGAM,
 NO.3, SHADAVATHRIGH NAGAR,
 THIRUTHURAI, SINGAMPURMAL EODL,
 CHENGALPATTU TALUK,
 CHENGALPATTU - DISTRICT - 605 204.

LOCATION OF Q.L.A. AREA:
 S.F.No : 1321(P) 2(P), MG. & 16/1,2,3,4,5
 EXTENT : 1.39.81 Hq.
 VILLAGE : SRUMALDUR,
 TALUK : LITHRAMUR,
 DISTRICT : KANCHEEPURAM,
 STATE : TAMIL NADU.

PLATE NO - V
 DATE OF SURVEY : 30.11.2022

CONCEPTUAL PLAN & SECTIONS
 SCALE: 1/1000

PREPARED BY :
 THIS IS TO CERTIFY THAT THE INFORMATION ON THE PLATE IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE GAINED FROM THE LEASE MAP AUTHORIZED BY STATE GOVERNMENT.

 S. SRINIVASAN, P.E.,
 JUNIOR ENGINEER

BOUNDARY COORDINATES

Sl. No.	EASTING	NORTHING
1	174818.374	113028.893
2	174818.374	113028.477
3	174823.349	113028.172
4	174823.349	113027.472
5	174813.389	113026.882
6	174813.389	113026.292
7	174813.389	113025.697
8	174813.389	113025.102
9	174813.389	113024.507
10	174813.389	113023.912
11	174813.389	113023.317
12	174813.389	113022.722
13	174813.389	113022.127
14	174813.389	113021.532
15	174813.389	113020.937
16	174813.389	113020.342
17	174813.389	113019.747
18	174813.389	113019.152
19	174813.389	113018.557
20	174813.389	113017.962
21	174813.389	113017.367
22	174813.389	113016.772
23	174813.389	113016.177
24	174813.389	113015.582
25	174813.389	113014.987

DATUM : UTM WGS84 ZONE 48 NORTH

SECTION ALONG X-Y
 P.S.C POINT



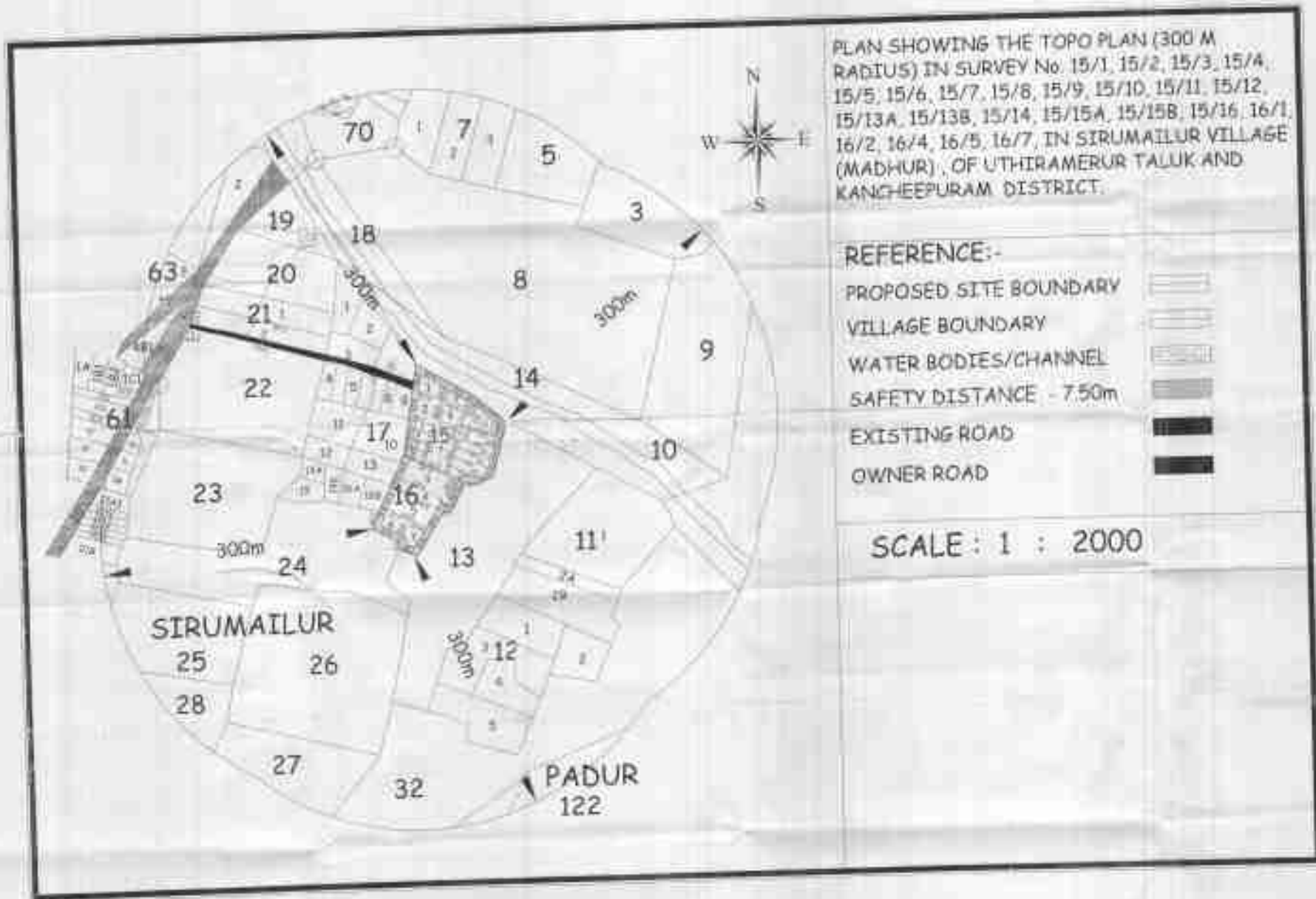
SECTION ALONG A-B

SECTION ALONG C-D



Ultimate Pit Dimension (max)
 = 164m X 76m X 33m (D)

TOPO SKETCH





INDEX

- Q.L. APPLIED AREA BOUNDARY
- 10m & 7.5m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- GRAVEL
- SHRUB
- APPROACH ROAD
- ODAI

APPLICANT :

TV. MURUGAPPA BLUE METALS,
PARTNER THIRU. S. SNAELMAR,
3/6, RAMALINGAM,
No.3, BRAGAVASINGH NAGAR,
THIRUTHUR, SINGAMFERMAL EOL,
CHENGALPATTU TALUK,
CHENGALPATTU DISTRICT - 603 204.

LOCATION OF Q.L.A AREA:

S/F No. : 15/1(P) 2(P) MC & 16/1.2 MC.
EXTENT : 1.39.81 Ha.
VILLAGE : SIRMALOUR
TALUK : UTHIRAMERUR
DISTRICT : KANCHIPEURAM
STATE : TAMIL NADU.

PLATE NO - II

DATE OF SURVEY : 30.11.2022

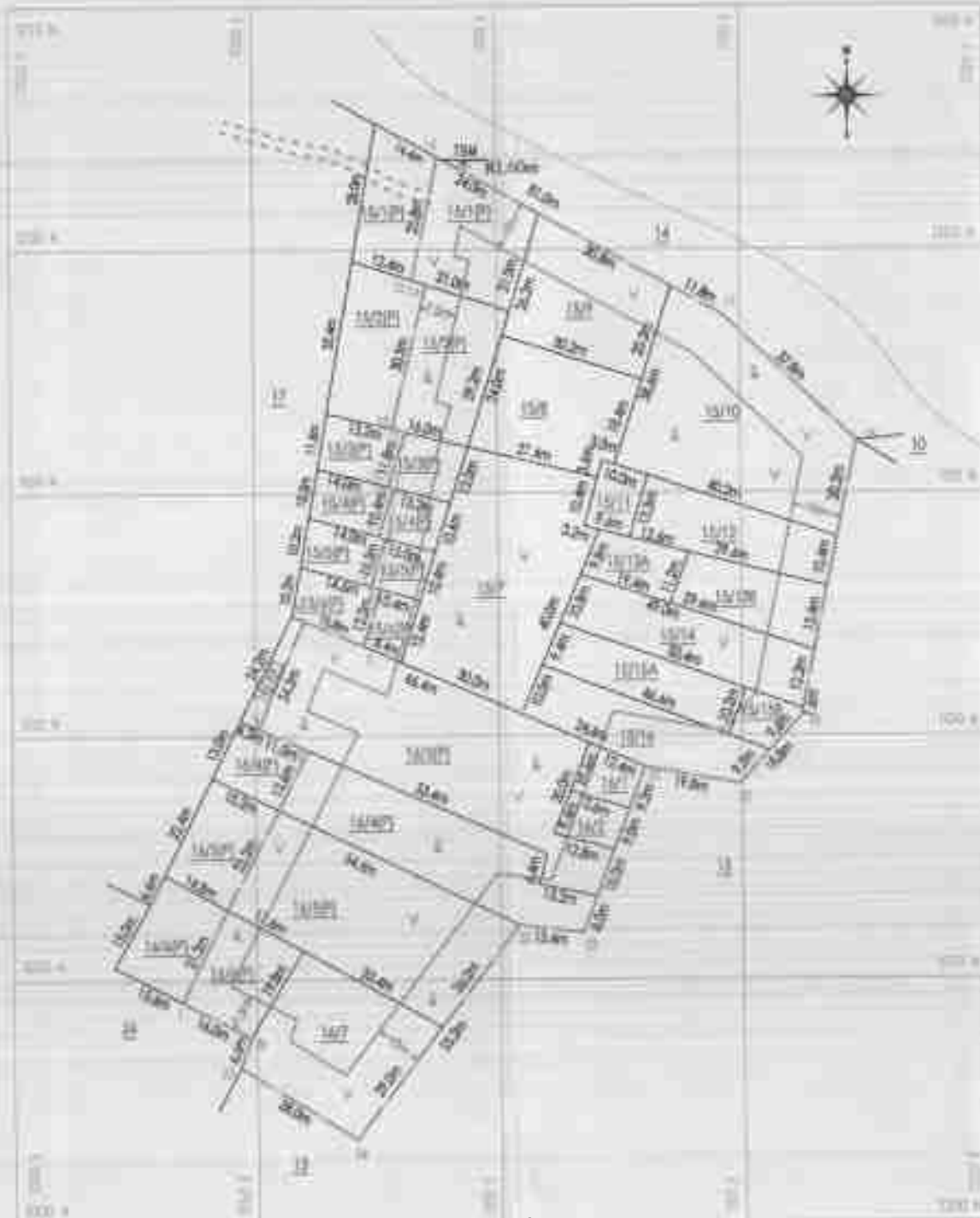
**QUARRY LEASE PLAN &
SURFACE PLAN**

SCALE : 1/1000

PREPARED BY :

WE DO NOT GUARANTEE THAT THE INFORMATION IN THIS
PLAN IS TRUE AND CORRECT TO THE BEST OF MY
KNOWLEDGE BASED UPON THE LATEST MAP
APPROVED BY STATE GOVERNMENT

Survey Dept.
P. J. THIRUMALAI & S. P. L.
QUALITY FORUM



BOUNDARY CO-ORDINATE

Sl. No.	SAYIDE	ICHOTIDE
1	27 40 33.47N	77 50 35.07E
2	27 42 33.07N	77 50 35.47E
3	27 42 33.07N	77 50 35.77E
4	27 42 33.07N	77 50 36.07E
5	27 42 33.07N	77 50 36.37E
6	27 42 33.07N	77 50 36.67E
7	27 42 33.07N	77 50 36.97E
8	27 42 33.07N	77 50 37.27E
9	27 42 33.07N	77 50 37.57E
10	27 42 33.07N	77 50 37.87E
11	27 42 33.07N	77 50 38.17E
12	27 42 33.07N	77 50 38.47E
13	27 42 33.07N	77 50 38.77E
14	27 42 33.07N	77 50 39.07E
15	27 42 33.07N	77 50 39.37E
16	27 42 33.07N	77 50 39.67E
17	27 42 33.07N	77 50 39.97E
18	27 42 33.07N	77 50 40.27E
19	27 42 33.07N	77 50 40.57E
20	27 42 33.07N	77 50 40.87E
21	27 42 33.07N	77 50 41.17E
22	27 42 33.07N	77 50 41.47E
23	27 42 33.07N	77 50 41.77E
24	27 42 33.07N	77 50 42.07E
25	27 42 33.07N	77 50 42.37E
26	27 42 33.07N	77 50 42.67E

DATA: 15M WGS84 ZONE 48 NORTH

HYDROGEOLOGICAL REPORT

Rough stone and Gravel Quarry Over an extent of 1.39.81ha of Patta lands in S.F.Nos.15/1 (P), 2 (P), 3 (P), 4 (P), 5 (P), 6 (P), 7, 8, 9, 10, 11, 12, 13A, 13B, 14, 15A, 15B, 16, 16/1, 2, 3 (P), 4 (P), 5 (P), 6 (P) & 7 of Sirumailour Village, Uthiramerur Taluk, Kancheepuram District, Tamil Nadu State.

HYDROGEOLOGICAL REPORT

1. INTRODUCTION

NAME OF THE APPLICANT WITH ADDRESS-

NAME OF THE APPLICANT : **Tvl. Murugappa Blue Metals**
Partner Thiru.R.Sivakumar,
S/o. Ramalingam,
Address : No.3, Bhagavatsingh Nagar, Thirutheri,
Singaperumal Koil, Chengalpattu Taluk
& District.
Pin Code : 603 204
Mobile No : +91 99443 33709 & 87782 39460
Aadhaar No : 7127 7596 7197 (Refer Annexure No. IX)
Email ID : murugappablue metals.321@gmail.com

The Client requires detailed information on Ground Water Occurrences at Proposed Project Site. The objective of the present study is to assess the availability of groundwater and comment on aspects of depth to potential aquifers, aquifer availability and type, possible yields and water quality. For this purpose all available hydrogeological information of the areas has been analyzed, and a geophysical survey was done.

The investigations involved hydrogeological, geophysical field investigations and a detailed study in which the available relevant geological and hydrogeological data were collected, analyzed, collated and evaluated within the context of the Client's requirements.

The data sources consulted were mainly:

- a) Central Ground Water Board (CGWB) Data
- b) State & District Geological and Hydrogeological Reports and Maps.
- c) Technical reports of the area by various organizations.

2. SCOPE OF THE WORKS –

The scope of works includes:

- Site visits to familiarize with the project areas. Identify any issues that might impact the Ground Water Scenario due to proposed mining activities.
- To obtain, study and synthesize background information including the geology, hydrogeology and existing borehole data, for the purpose of improving the quality of assessment and preparing comprehensive hydrogeological reports,

- To carry out hydrogeological evaluation and geophysical investigations in the selected sites in order to determine potential for groundwater at project site.
- To prepare hydrogeological survey reports in conformity with the provisions of the rules and procedure outlined by the Central Ground Water Board (CGWB), by Assessment of water quality and potential infringement of National standards, Assessment of availability of groundwater and Impact of proposed activity on aquifer, water quality and other abstractors.

3. BACKGROUND INFORMATION

Geographical information of the study area-

The investigated site falls in the Toposheet No: 57 - P/14 Latitude between 12° 43' 08.62"N to 12° 43' 15.19"N and Longitude between 79° 50' 28.58"E to 79° 50' 33.18"E on WGS datum-1984.

REGIONAL GEOLOGY OF KANCHEEPURAMDISTRICT-

The Kanchipuram district is endowed with a complex geological set up with crystallinerocks occurring in the southern part of the area and the northern part of the area the crystalline rocks occur at depths covered by sedimentary formations ranging from Gondwanato Recent.The Precambrian crystalline rocks are represented by charnockites and contain several enclaves mafic granulite. Garnetiferousbiotite gneisses, leptinites and banded magnetite quartzites are also encountered as linear bands. Intrusions of dolerite dykes are also found.

The exposes crystalline rocks of Archaean age and sedimentary rocks ofGondwanaSupergroup and the Cuddalore Formation belonging to Mio-Pliocene age. A gravel and shingle bed locally known as Kanjeevaram Gravels belongs to the Pliocene to lower Pleistocene age. The laterite and alluvium are related to Quaternary age.

The Archaean rocks are represented by Khondalite Group, Charnockite Group andMigmatite complex. Garnet sillimanite gneiss is well exposed in the northeastern part of the district in Pachchamalai hill at Chrompet, Parangimalaiand southeast of Pallavaram. In Pachchamalai hill it is essentially a quartz sillimanite rich rock with minor amount of felspar.In Tambaram hill, charnockite and metapelite are intimately interbanded, particularly along the hinge zones. Isolated outcrops are also seen on either side of National Highway No.45 near Kadaperi. The major part of the district is occupied by charnockite with enclaves of khondalite, leptynite and BMQ seen around St. Thomas Mount, east of Guduvancheri, Madurantakam, and Paler and around Tirukkalukunram. St. Thomas mount is an extensively studied type area for the charnockite. It is a typical rock with bluish grey quartz, hard and

compact, jointed showing recognizable foliation at places. The outcrop stands out prominently as isolated cluster of hills.

The lower Gondwana sediments (Talchirs) overlie the Archaean rocks unconformably and are seen to the northeast and south of Palar river preserved in the trough faults and comprise boulder beds, dirty white to light green, greyish yellow fine sandstone, siltstone with clasts of rock fragments and khaki green to greenish grey shales.

Charnockite is applied to any orthopyroxene-bearing quartz-feldspar rock, composed mainly of quartz, perthite or antiperthite and orthopyroxene (usually hypersthene) formed at high temperature and pressure, commonly found in granulite facies metamorphic regions, as an end-member of the charnockite series.

Silt

Silt is granular material of a size between sand and clay, whose mineral origin is quartz and feldspar. Silt may occur as a soil (often mixed with sand or clay) or as sediment mixed in suspension with water (also known as a suspended load) and soil in a body of water such as a river. It may also exist as soil deposited at the bottom of a water body, like mudflows from landslides. Silt has a moderate specific area with a typically nonstick, plastic feel. Silt usually has a floury feel when dry, and a slippery feel when wet. Silt can be visually observed with a hand lens.

Stratigraphy sequences of Kanchipuram District

Age	Formation	Lithography
Recent	Alluvium and beach sands	Sand, gravel, silt and clay
Pleistocene	Laterite, soils, talus	Laterites, sandy clay, silt
Pleistocene to upper Miocene	Conjeevaram gravels	Boulders, cobbles Pebbles and gravels chiefly of quartzites
Lower Cretaceous to Jurassic	Sandstones & Shales	Fine to medium grained sand stone with clay intercalations of greenish soft shale
	Boulder bed	Big boulders of granite gneiss with or without Matrix of clay and the sand
Unconformity		
Archaean	Crystalline formations	Mixed gneisses, charnockites, granites and associated basic and ultra basic intrusive

4. GEOPHYSICAL INVESTIGATION METHODS

A variety of methods are available to assist in the assessment of geological sub-surface conditions. The main emphasis of the fieldwork undertaken was to determine the thickness and composition of the sub-surface formations and to identify water-bearing zones. This information was principally obtained in the field using, and vertical electrical soundings (VES). The VES probes the resistivity layering below the site of measurement. This method is described below.

Resistivity Method

Vertical electrical soundings (VES) were carried out to probe the condition of the sub-surface and to confirm the existence of deep groundwater. The VES investigates the resistivity layering below the site of measurement.

Basic Principles

The electrical properties of rocks in the upper part of the earth's crust are dependent upon the lithology, porosity, and the degree of pore space saturation and the salinity of the pore water. Saturated rocks have lower resistivity than unsaturated and dry rocks. The higher the porosity of the saturated rock, or the higher the salinity of the saturating fluids, the lower is the resistivity. The presence of clays and conductive minerals also reduces the resistivity of the rock.

The resistivity of earth materials can be studied by measuring the electrical potential distribution produced at the earth's surface by an electric current that is passed through the earth. Current is moved through the subsurface from one current electrode to the other and the potential difference is recorded as the current passes. From this information, resistivity values of various layers are acquired and layer thickness can be identified.

The apparent resistivity values determined are plotted as a log function versus the log of the spacing between the electrodes. These plotted curves identify thickness of layers. If there are multiple layers (more than 2), the acquired data is compared to a master curve to determine layer thickness.

This method is least influenced by lateral in-homogeneities and capable of providing higher depth of investigation.

The resistance R of a certain material is directly proportional to its length L and cross-sectional area A , expressed as:

$$R = R_s * L/A \text{ (in Ohm)}$$

Where R_s is known as the specific resistivity (characteristic of the material and independent of its shape or size)

With Ohm's Law,

$$R = dV/I \text{ (Ohm)}$$

Where dV is the potential difference across the resistor and I is the electric current through the resistor. The specific resistivity may be determined by:

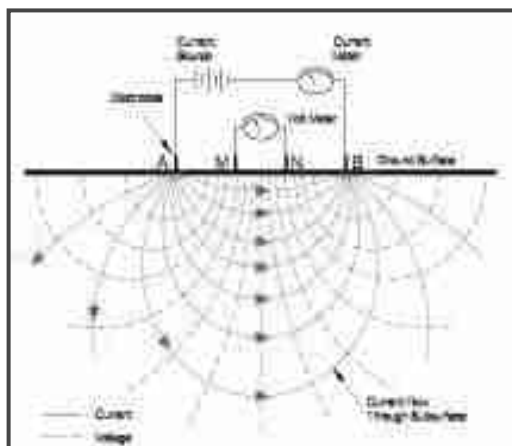
$$R_s = (A/L) * (dV/I) \text{ (in Ohm m)}$$

Vertical Electrical Sounding (VES)

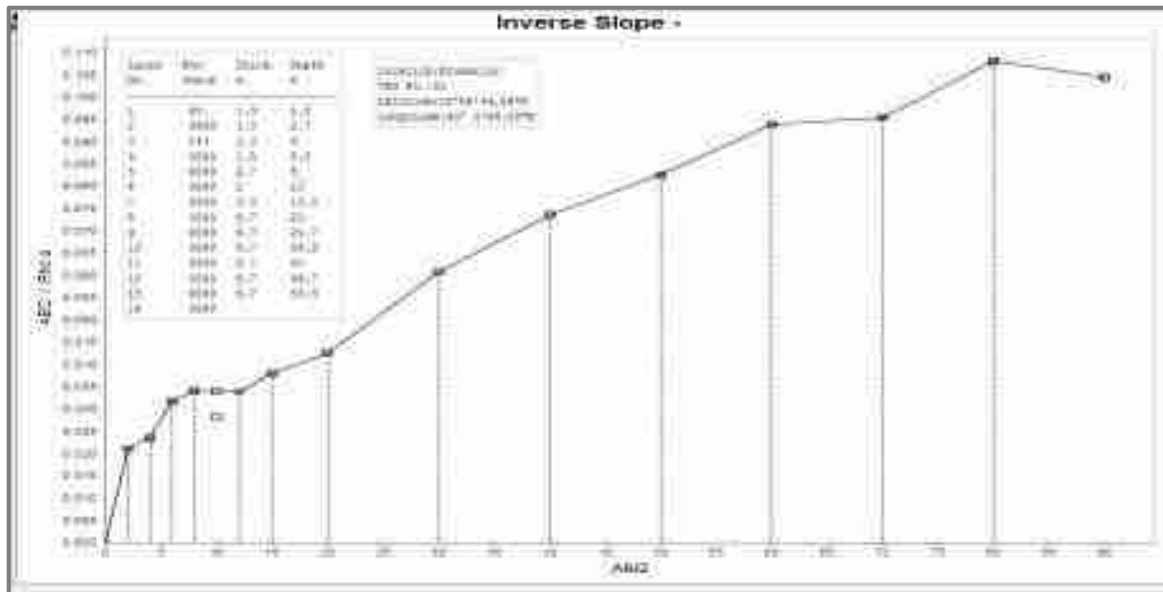
When carrying out a resistivity sounding, current is led into the ground by means of two electrodes. With two other electrodes, situated near the center of the array, the potential field generated by the current is measured. From the observations of the current strength and the potential difference, and taking into account the electrode separations, the ground resistivity can be determined. During a resistivity sounding, the separation between the electrodes is step-wise increased (known as a Schlumberger Array), thus causing the flow of current to penetrate greater depths. When plotting the observed resistivity values against depth on double logarithmic paper, a resistivity graph is formed, which depicts the variation of resistivity with depth. This graph can be interpreted with the aid of a computer, and the actual resistivity layering of the subsoil is obtained. The depths and resistivity values provide the hydro geologist with information on the geological layering and thus the occurrence of groundwater.

Geophysical Survey at study area

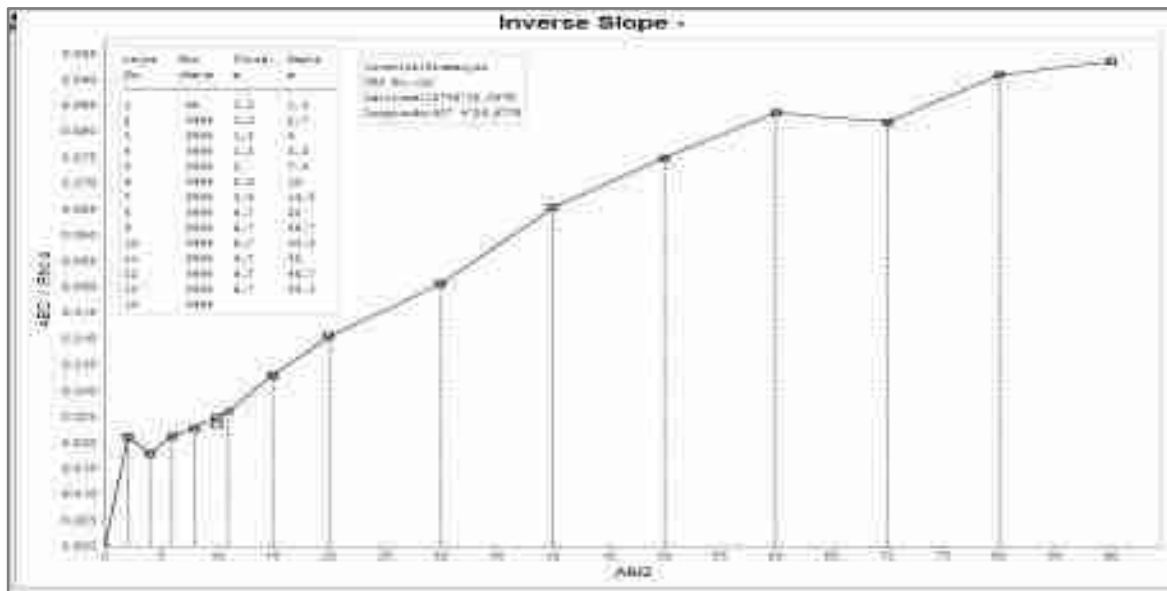
Geophysical Data's and Inver slop method Graphs



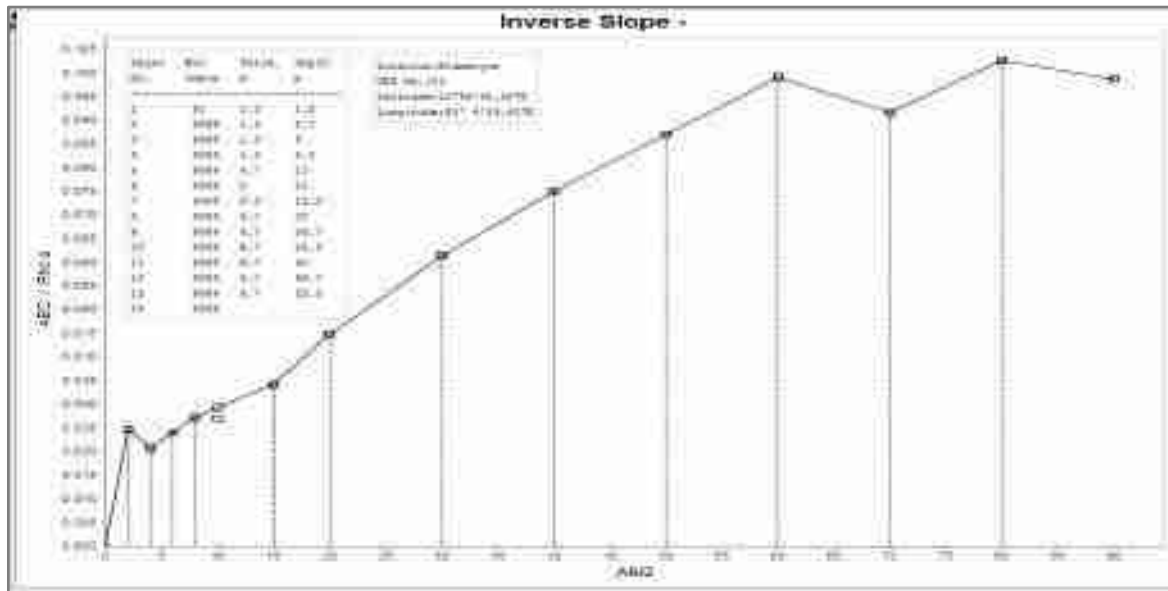
STATION-1- 12°37'6.02"N 79°41'32.52"E					
<i>S.No</i>	<i>Ab/2</i>	<i>Mn/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	2	1	4.71	20.26	95.42
2	4	1	23.55	7.26	170.97
3	6	1	54.95	3.46	190.13
4	8	1	98.91	2.38	235.41
5	10	1	155.45	1.90	295.36
6	10	5	23.55	15.06	354.66
7	15	5	62.80	6.30	395.64
8	20	5	117.75	4.00	471.00
9	30	5	274.75	1.80	494.55
10	40	5	494.55	1.10	544.01
11	50	5	777.15	0.78	606.18
12	60	5	1122.55	0.57	639.85
13	70	5	1530.75	0.48	734.76
14	80	5	2001.75	0.37	740.65
15	90	5	2535.55	0.34	862.09
16	100	5	3132.15	0.31	970.97



STATION-2 - 12°37'3.39"N 79°41'35.43"E					
<i>S.No</i>	<i>Ab/2</i>	<i>Mn/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	2	1	4.71	20.26	95.42
2	4	1	23.55	9.56	225.14
3	6	1	54.95	5.16	283.54
4	8	1	98.91	3.56	352.12
5	10	1	155.45	2.59	402.62
6	10	5	23.55	18.26	430.02
7	15	5	62.80	7.26	455.93
8	20	5	117.75	4.20	494.55
9	30	5	274.75	2.16	593.46
10	40	5	494.55	1.24	613.24
11	50	5	777.15	0.86	668.35
12	60	5	1122.55	0.64	718.43
13	70	5	1530.75	0.56	857.22
14	80	5	2001.75	0.44	880.77
15	90	5	2535.55	0.38	963.51
16	100	5	3132.15	0.34	1064.93

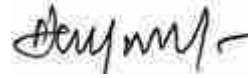


STATION-3 - 12°37'6.01"N 79°41'29.87"E					
<i>S.No</i>	<i>Ab/2</i>	<i>Mn/2</i>	<i>K</i>	<i>R</i>	<i>Rho</i>
1	2	1	4.71	17.26	81.29
2	4	1	23.55	8.26	194.52
3	6	1	54.95	4.56	250.57
4	8	1	98.91	2.98	294.75
5	10	1	155.45	2.20	341.99
6	10	5	23.55	15.80	372.09
7	15	5	62.80	7.00	439.60
8	20	5	117.75	3.80	447.45
9	30	5	274.75	1.78	489.06
10	40	5	494.55	1.08	534.11
11	50	5	777.15	0.74	575.09
12	60	5	1122.55	0.54	606.18
13	70	5	1530.75	0.50	765.38
14	80	5	2001.75	0.39	780.68
15	90	5	2535.55	0.36	912.80
16	100	5	3132.15	0.34	1064.93



1. Conclusion –

Based on the available information and the geophysical investigations it is concluded that the project area is considered to have medium to good groundwater potential. Productive aquifers are expected within weathered/fractured metamorphic terrain. Present scenario is shallow aquifers are expected above 85-90m BGL. The ultimate pit limit as per the approved mining plan depth is 35m which will have no impact on the Ground Water.



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315/2021

உ.மு.315 /2021
நாள். 22, 09.2021
சமர்ப்பிக்கப்படுகிறது

வருவாய் ஆய்வாளர்,
குண்ணவாககம் குறுவட்டம்



பொருள்

கனிமங்களும் குவாரிகளும்- காஞ்சிபுரம் மாவட்டம் -
உத்திரமேரூர் வட்டம் நெ.84 சிறுமையிலூர் கிராமம் -
புன்செய் புல எண் 15/1, 2, மற்றும் சில புல
எண்களின் விஸ்தீரணம் 1.65.5 ஹெக்டேர்ஸ் பட்டா
நிலங்களில் சாதாரண கற்கள் / கிராவல் வெட்டி
எடுக்க தி.மு.முருகப்பா புளமுட்டல்ஸ் நிறுவனத்தின்
சர்பாக திரு.சிவக்குமார் என்பவர் பத்து
ஆண்டுகளுக்கு குவாரி குத்தகை உரிமம் கோரி மனு
அளித்தது தொடர்பாக- விசாரணை அறிக்கை
அனுப்பதல் தொடர்பாக

பார்வை

- 1.காஞ்சிபுரம் வருவாய் கோட்டாட்சியரின் கடித
ந.க.எண் 1935/2021/அ நாள் 07.07.2021
- 2.உத்திரமேரூர் வட்டாட்சியரின் அதி.மு./அ நாள்
08.07.2021
- 3.நெ.84,சிறுமையிலூர் கிராம நிருவாக அலுவலரின்
அறிக்கை நாள் 09.09.2021

காஞ்சிபுரம் மாவட்டம் - உத்திரமேரூர் வட்டம் நெ.84 சிறுமையிலூர் கிராமம் -
புன்செய் புல எண் 15/1, 2, மற்றும் சில புன்செய் புல எண்களின் மொத்த விஸ்தீரணம்
1.65.5 ஹெக்டேர்ஸ் ஏர்ஸ் (4.09 ஏக்கர்) பட்டா நிலங்களில் சாதாரண கற்கள் / கிராவல்
வெட்டி எடுக்க தி.மு.முருகப்பா புளமுட்டல்ஸ் நிறுவனத்தின் பங்குதாரர்களின் ஒருவரான
திரு.சிவக்குமார் த/பெ. ராமலிங்கம் எண்3, பகவத்சிங் நகர், திருத்தேரி, சிங்கபெருமாள்
கோயில் தெரு, செங்கல்பட்டு வட்டம் (ம) மாவட்டம் என்பவர் பத்து ஆண்டுகளுக்கு குவாரி
குத்தகை உரிமம் கோரி மனு அளித்தது தொடர்பாக விசாரணை மேற்கொண்டு
எனதறிக்கையினை பின்வருமாறு சமர்ப்பிக்கிறேன்.

மனுதாரர் கல் குவாரி அனுமதி கோரும் புன்செய் புல எண் 15/1, 2, மற்றும் சில
புன்செய் புல எண்களின் விஸ்தீரணம் 1.65.5 ஹெக்டேர்ஸ் ஹெக்டேர் பரப்பிற்கு
குத்தகை அனுமதி கோரியுள்ள மேற்படி புலங்கள் உள்ள இடம் உத்திரமேரூர் வட்டம்,
நெ.84,சிறுமையிலூர் கிராம பஞ்சாயத்தைச் சேர்ந்தது ஆகும், மேற்படி புல எண்கள்
மனுதாரரின் அனுபவத்தில் இருந்து வருகிறது, மேற்படி புல எண்கள் சிறுமையிலூர்
கிராமக்கணக்கில் பின்வருமாறு தாக்கலாகி உள்ளது.

வ. எண்	புல எண்	வகைப்பாடு	மொத்த பரப்பு (ஹெக்டேரில்)	குத்தகை கோரப்படும் பரப்பு (ஹெக்டேரில்)	பட்டா எண்	உரிமையாளர் பெயர்	
1	15/1	புன்செய்	0.09.0	0.09.0	706	முருகப்பா புலு மெட்டல்ஸ் நிறுவனம்(வ)	
2	15/2	புன்செய்	0.10.0	0.10.0			
3	15/3	புன்செய்	0.03.0	0.03.0			
4	15/4	புன்செய்	0.03.0	0.03.0			
5	15/5	புன்செய்	0.03.0	0.03.0			
6	15/6	புன்செய்	0.03.0	0.03.0			
7	15/7	புன்செய்	0.14.0	0.14.0			
8	15/8	புன்செய்	0.07.0	0.07.0			
9	15/9	புன்செய்	0.07.5	0.07.5			
10	15/10	புன்செய்	0.15.0	0.15.0			
11	15/11	புன்செய்	0.01.0	0.01.0			
12	15/12	புன்செய்	0.05.5	0.05.5			
13	15/13A	புன்செய்	0.02.0	0.02.0			
14	15/13B	புன்செய்	0.03.5	0.03.5			
15	15/14	புன்செய்	0.06.0	0.06.0			
16	15/15A	புன்செய்	0.04.0	0.04.0			
17	15/15B	புன்செய்	0.01.5	0.01.5			
18	15/16	புன்செய்	0.05.0	0.05.0			
19	16/1	புன்செய்	0.01.5	0.01.5			715
20	16/2	புன்செய்	0.01.5	0.01.5			
21	16/3	புன்செய்	0.18.0	0.18.0			
22	16/4	புன்செய்	0.10.5	0.10.5			
23	16/5	புன்செய்	0.16.5	0.16.5			
24	16/6	புன்செய்	0.06.5	0.06.5			
25	16/7	புன்செய்	0.08.0	0.08.0			
	மொத்தம்		1.65.5	1.65.5			

செங்கல்பட்டு மாவட்டம் திருத்தேரி சிங்கபெருமாள் கோயில், பகத்சிங் எண் 3, என்ற முகவரியில் வசித்து வரும் முருகப்பா புலு மெட்டல்ஸ் நிறுவனத்தின் பங்குதாரரும் சென்னை குரோம்பேட்டை லட்காமிபுரம், ராஜிவ் காந்தி தெரு என்ற விலாசத்தில் வசித்து திரு. திரு. ராமலிங்கம் குமாரர் ஆர். சிவக்குமார் ஆகிய தங்களும், மேற்படி முருகப்பா புலு மெட்டல்ஸ் நிறுவன பங்குதாரரும் செங்கல்பட்டு மாவட்டம் திருக்கழுக்குன்றம் வட்டம் முள்ளிக்கொளத்தூர் கிராமம் சட்ரஸ் மெயின்ரோடு விலாசத்தில் வசித்து வரும் திரு. தேவதாஸ் குமாரர் மற்றும் சென்னை குரோம்பேட்டை லட்காமிபுரம், குளக்கரை 3 வது தெரு, கதவு எண் 10/6 என்ற விலாசத்தில் வசித்து வரும் திரு. கிருஷ்ண நாயக்கர் குமாரர் கே. செல்லமுத்து ஆகிய மூவரும் செங்கல்பட்டு சார் பதிவாளர் அலுவலகத்தில் பதிவு பெற்ற ஆவண எண் 1448/2012-நாள் 31.08.2012 இன் படி பதவு துறையில் பதிவு செய்துள்ளனர் (நகல் இணைக்கப்பட்டுள்ளது) மேற்படி சிறுமையிலூர் கிராம புன்செய்

புல எண்கள்.15/1 மற்றும் சில புன்செய் புல எண்களின் மொத்த விஸ்தீரணம் 1.65.5
 உெறக்டேர் ஏர்ஸ் நிலங்கள் 10 வருட காலத்திற்கு இப்பிராமண பத்திரம்
 செல்லுபடியாகும் என தெரிவித்துள்ளனர். தற்போது மேற்படி இடத்தில் மனுதாரர்
 புதியதாக குவாரி பணி தொடரப் போவதாக விசாரணையில் தெரிவித்துள்ளார்.
 இதற்கான கணினி சிட்டா, புலப்பட வரைபடம் மற்றும் அடங்கல் நகல்
 இணைக்கப்பட்டுள்ளது. மேற்படி சொத்துக்கள் அனைத்தும் முருகப்பா
 புலு மெட்டல்ஸ் நிறுவனத்தின் பெயரிலேயே உள்ளது.

மேற்படி குவாரி அமையவுள்ள புலங்களான புல எண்கள். 15/1 ,15/2 மற்றும்
 சில புன்செய் புல எண்களின் மொத்தவிஸ்தீரணம் 1.65.5 உெறக்டேர் ஏர்ஸ்
 நிலங்களின் நான்கெல்லைகள் விவரம் பின்வருமாறு-

வடக்கு	புல எண். 14 கால்வாய்
மேற்கு	புல எண் 17/6,9,10- மனுதாரர் நிலம்
தெற்கு	புல எண் 13- மேய்க்கால் நிலம் மற்றும் புல எண் 24/1பி- குமார் நிலம்
கிழக்கு	புல எண் 13- மேய்க்கால் நிலம்

மேற்படி புலங்கள் புலத்தணிக்கை செய்யப்பட்டது. மேற்படி நிலத்தில்
 விவசாயத்திற்கு பயன்படாத நிலையில் தற்போது காலியாகவும் கற்கள் மற்றும் மண்
 கொட்டப்பட்டுள்ளது. மேற்படி கல் குவாரி பணி செய்ய உத்தேசிக்கப்பட்டுள்ள
 புலங்களிலிருந்து 300 மீட்டர் சுற்றளவில் புல எண் 62-ல் 1 தளம் வீடு, ஒரு சர்ச்
 மற்றும் ஒரு சலூன் கடை உள்ளது என்றும் , புல எண் 56-ல் புன்செய் நிலத்தில் 8
 தளம் வீடுகள் ஆக மொத்தம் 9 குடியிருப்புகள் உள்ளன என்பதும்
 குண்ணவாக்கம் குறுவட்ட நில அளவரின் கூட்டு புல எண்களின் வரைபடத்தின் மூலம்
 தெரிகிறது. மேலும் புல எண் 22/1A1, 22/1D, 1E மற்றும் சில புல எண்களில் பட்டா
 எண் 692, 1168-ல் அசோக் கான்கிரீட் நிறுவனத்தின் கட்டிடம் மற்றும் பணியாளர்
 குடியிருப்பு அமைந்துள்ளது. மேலும் புல எண் 23-ல் 1.94.0 உெறக்டேர்ஸ் ஏர்ஸ்
 மற்றும் புல எண் 24/2-ல் 0.40.5 உெறக்டேர்ஸ் ஏர்ஸ் சேரி நத்தம்காலி என உள்ளது.
 மேற்படி புலங்களின் கல்விக்கூடங்களோ, மாநிலநெடுஞ்சாலைகளோ,
 புராதானச்சின்னங்களோ, அரசுகட்டடங்களோ, கோயில்களோ, மதுதிகளோ, இரயில்
 பாதைகளோ ஏதும் இல்லை. பிரஸ்தாப புலத்தில் விலையுயர்ந்த மரங்கள் மற்றும்
 சுடுகாடு ஏதும் இல்லை. மேற்படிபுலங்கள் வழியாக உயர்மின்னழுத்த கம்பிகள்
 செல்லவில்லை.

மேற்படி புதியதாக கல்குவாரி அமைய உள்ள இடத்திற்கு சென்றிட மதுர்
 முதல் நெல்வாய் செல்லும் தார் சாலையிலிருந்து பிரஸ்தாப நிலத்திற்கு புல எண்
 21/2 மற்றும் 17/3, 17/6 ஆகிய பட்டா நிலங்களில் உள்ள மண் பாதையை
 அணுகுபாதையாக அமைந்துள்ளது என மனுதாரர் வாக்குமூலத்தில் தெரிவித்துள்ளனர்.
 இது குறித்து கிராமத்தில் ஏ1 நோட்டீஸ் பொது விளம்பரம் 08.07.2021-ல் செய்யப்பட்டதில்

பொது மக்களிடமிருந்து ஆட்சேபணை வரப்பெற்றுள்ளது .19.07.2021 அன்று மாவட்ட ஆட்சியர் காஞ்சிபுரம் அவர்களிடம் தங்கள் மனு (GDP) மூலமாக ஆட்சேபணை தெரிவிக்கப்பட்டுள்ளது. மேற்படி நிலங்களில் கல்குவாரி அமைப்பதால் தங்களின் விவசாய நிலங்கள் மாசு அடைவதோடு, சுத்தமான காற்று, நல்ல குடிநீர், மற்றும் விவசாயம் நிலத்தடி நீர்மட்டம் நீர் உறிஞ்சப்படுகிறது. என்றும் வெளியில் போகும் போது சாலைகளில் ஏற்படும் விபத்துக்களால் அன்றாடம் அச்சமுடன் வாழ்ந்து வருகிறோம் என்றும் கல்குவாரிக்கு வரும் கரைக வாகன ஓட்டுநர்களால் கஞ்சா குடிப்பவர்கள் , மது பிரியர்கள் வெளி மாவட்டத்திலிருந்து வரும் வாகன ஓட்டிகள் இரவு நேரத்தில் எங்கள் கிராமத்தில் சுற்றி திரிகிறார்கள் என்றும் குவாரிகளில் வைக்கப்படும் அதி பயங்கர வேட்டு வெடி பொருட்களால் எங்களின் வாழ்வாதாரம் பாதிப்புள்ளாகிறது என்றும் கிராம பொது மக்கள் தங்களின் ஆட்சேபணை மனுவில் தெரிவித்துள்ளனர். இது தொடர்பாக மனுதாரரின் விசாரணையில் மேற்கண்ட பிரஸ்தாப புலத்தில் கல்குவாரி அமையும் பட்சத்தில் கல்குவாரி சுற்றியுள்ள அரசு நில மேய்க்கால் நிலம் மற்றும் வாய்க்காலில் எவ்வித ஆக்ரமணம் செய்ய மாட்டேன் என்றும் , பொது மக்களுக்கு எவ்வித இடையூறு ஏற்படாத வண்ணம் அரசு நிபந்தனைகளுக்கு உட்பட்டு நடப்பேன் என்று தனது வாக்குமூலத்தின் மூலம் தெரிவித்துள்ளார்.

மேற்படி கல்குவாரி அனுமதி பெற விண்ணப்பக் கட்டணம் மற்றும் தொடக்கநிலை செலவுகளுக்காக ரூ.1500/- 15.07.2021 தேதியில் அரசுகணக்கில் மாவட்டக்கருவூலத்தில் பணம் செலுத்தப்பட்டுள்ளது. மேலும் கனிமத்துறைக்கு செலுத்தவேண்டிய சுரங்கபாக்கி மற்றும் அரசுக்கு செலுத்தவேண்டிய வருமானபாக்கி ஏதும் இல்லை என உறுதிமொழி பத்திரம் பெற்று இணைக்கப்பட்டுள்ளது.

எனவேமேற்படிபுன்செய் புல எண் 15/1, 2, மற்றும் சில புன்செய் புல எண்களின் மொத்த விஸ்தீரணம் 1.65.5 ஹெக்டேர்ஸ் ஏர்ஸ் பரப்பிற்கு குத்தகை அனுமதி கோரியுள்ள நிலங்களில் சக்கைக்கல் மற்றும் கிராவல் மண் எடுத்து கல்குவாரி பணி செய்ய தமிழ்நாடு சிறுகனிம விதிகள் 1959-ன் விதிகளுக்கு உட்பட்டும் மேற்படி அரசு புறம்போக்கு நிலங்களில் ஆக்கிரமணம் செய்யாத வகையில் கல்குவாரி பணிசெய்ய நிபந்தனையின் கீழ் முருகப்பா புளூ மெட்டல்ஸ் நிறுவனத்தின் சார்பாக திரு. சிவக்குமார் த/பெ. ராமலிங்கம் என்பவருக்கு அனுமதி வழங்குவது குறித்து மேல்நடவடிக்கை தொடரலாம் என்றும், மேலும் இத்துடன் கிராம நிர்வாக அலுவலரின் அறிக்கை, கிராமத்தார் வாக்குமூலம், மனுதாரர் வாக்குமூலம், பொது விளம்பரம் மற்றும் தொடர்புடைய ஆவணங்கள் இணைத்துள்ளேன் என்பதையும் பணிவுடன் தெரிவித்துக்கொள்கிறேன்.

இணைப்பு:- விசாரணைக்கட்டுகள்
பத்திரநகல்கள், கிராமக்கணக்குநகல்கள்

பெறுநர் :-
வட்டாட்சியர் , உத்திரமேரூர்.

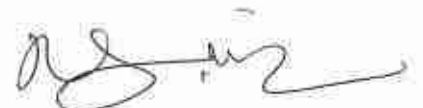
தங்கள் உண்மையுள்ள,
கிராம நிர்வாக அலுவலர்
வருவாய் ஆய்வாளர்
இணைப்புக்கம் குறுவட்டம்
உத்திரமேரூர் வட்டம்

செங்கல்பட்டு மாவட்டம், செங்கல்பட்டு வட்டம், சிங்கமெருமாள்மேலில், திருத்தேரி கிராமம், பகவத்சிங் நகர் முகவரியில் உள்ள முருகப்பா ப்ளமெட்டல்ஸ் பங்குதாரர்களில் ஒருவரான ரா.சிவக்குமார்(த/பெ. ராமலிங்கம்) என்பவர் கொடுத்த வாக்குமூலம்

நான் மேற்குறிப்பிட்ட முகவரியில் உள்ள முருகப்பா ப்ளமெட்டல்ஸ் பங்குதாரர்கள் 1. தே.நந்தகுமார் (2)ரா.சிவக்குமார்(3)கே.செல்லமுத்து ஆகிய மூவரில் நானும் ஒரு பங்குதாரர் ஆவேன். பங்குதாரர்கள் மூவரும் பதிவுப் பெற்ற ஆவண எண்.1448/2012-இன்படி பதிவுத்துறையில் பதிவு செய்துள்ளோம். நான் தற்போது எனது பெயரில் காஞ்சிபுரம் மாவட்டம், உத்திரமேரூர் வட்டம், சிறுமேலூர் கிராமத்தில் பட்டா எண். 706, சர்வே எண்கள்.15/1(0.09.0), 15/10(0.15.0), 15/11(0.01.0), 15/12(0.05.5), 15/13A(0.02.0), 15/13B(0.03.5), 15/14(0.06.0), 15/15A(0.04.0) 15/15B(0.01.5), 15/16(0.05.0), 15/2(0.10.0), 15/3(0.03.0), 15/4(0.03.0), 15/5(0.03.0), 15/6(0.03.0), 15/7(0.14.0), 15/8(0.07.0), 15/9 (0.07.5), 16/3(0.18.0), 16/6(0.06.5) ஆக 1.27.5 ஹெக்டேர் புன்செய் நிலங்கள் மற்றும் பட்டா எண்.715-இல் சர்வே எண்கள்.16/1(0.01.5), 16/2(0.01.5), 16/4(0.10.5), 16/5(0.16.5), 16/7(0.08.0) ஆக 0.38.0 ஹெக்டேர் புன்செய் நிலங்கள் ஆக மொத்தம் 1.65.5 ஹெக்டேர் (4.09ஏக்கர்) புன்செய் நிலங்களில் புதியதாக கல்குவாரி செய்திட சாதாரண சுற்கள் மற்றும் கிராவல் மணல் எடுக்க மனுச் செய்துள்ளேன். அதன் அடிப்படையில் என்னை குண்ணவாக்கம் வருவாய் ஆய்வாளரான தாங்கள் தேரில் இன்று(-09-2021) விசாரணை செய்வதை தெரிந்துக் கொண்டேன்.

நான் புதியதாக கல்குவாரி செய்திட மனுச் செய்துள்ள சர்வே எண்களுக்கு சென்றிட மதுர் முதல் நெல்வாய் செல்லும் தார் சாலையிலிருந்து முருகப்பா ப்ளமெட்டல்ஸ் பங்குதாரர்களுக்கு சொந்தமான சிறுமேலூர் கிராமம், பட்டா எண். -இல் சர்வே எண். பட்டா புன்செய் நிலம் வழியாக வழித்தடம் அணுகுபாதை அமைத்துள்ளோம். மேலும் புதியதாக கல்குவாரி செய்துள்ள இத்திற்கு அருகில் உள்ள புறம்போக்கு மேய்க்கால் நிலத்தினை எக்காலத்திலும் ஆக்கிரமிப்பு செய்ய மாட்டோம் என உறுதி அளிக்கிறேன். மேலும் புதியதாக கல்குவாரிக்கு மனுச் செய்துள்ள இங்களை சுற்றிலும் முருகப்பா ப்ளமெட்டல்ஸ் பெயரில் பட்டா நிலங்கள் உள்ளது. புதிய குவாரி தொடர்பாக அரசு நிர்ந்தனகளுக்குப் பட்டு நடப்பேன் என்பதையும் உறுதி அளிக்கிறேன்.

ஆகவே முருகப்பா ப்ளமெட்டல்ஸ் பங்குதாரர்களில் ஒருவரான எனக்கு காஞ்சிபுரம் மாவட்டம், உத்திரமேரூர் வட்டம், சிறுமேலூர் கிராமத்தில் பட்டா எண். 706, சர்வே எண்கள்.15/1(0.09.0), 15/10(0.15.0), 15/11(0.01.0), 15/12(0.05.5), 15/13A(0.02.0), 15/13B(0.03.5), 15/14(0.06.0), 15/15A(0.04.0) 15/15B(0.01.5), 15/16(0.05.0), 15/2(0.10.0), 15/3(0.03.0), 15/4(0.03.0), 15/5(0.03.0), 15/6(0.03.0), 15/7(0.14.0), 15/8(0.07.0), 15/9 (0.07.5), 16/3(0.18.0), 16/6(0.06.5) ஆக 1.27.5 ஹெக்டேர் புன்செய்



மற்றும் பட்டா எண்.715-இல் சர்வே எண்கள்.16/1(0.01.5), 16/2(0.01.5),
16/4(0.10.5), 16/5(0.16.5), 16/7(0.08.0) ஆக 0.38.0 ஹெக்டேர் புன்செய்
நிலங்கள் ஆக மொத்தம் 1.65.5 ஹெக்டேர் (4.09ஏக்கர்) பரப்பளவுள்ள புன்செய்
நிலத்தில் புதியதாக கல்குவாரி-சாதாரண கற்கள் மற்றும் கிராவல் மண் எடுக்க
அனுமதி வழங்குமாறு கேட்டுக் கொள்கிறேன்.

/பாடித்தாப் பார்த்தேன் சரி/



(முன்மொழி)

21/9/2022

வருவாய் ஆய்வாளர்
குண்ணவாக்கம் குடிசை
உத்திரமேரூர் வட்டம்

84. മൃഗങ്ങളുടെ കൃത്യം.

കൃത്യം കൃത്യം ഉണ്ടാകുന്നു:

കൃത്യം കൃത്യം, 2 കൃത്യം കൃത്യം.

84. മൃഗങ്ങളുടെ കൃത്യം, കൃത്യം കൃത്യം ഉണ്ടാകുന്നു.

മൃഗങ്ങളുടെ കൃത്യം, 84. മൃഗങ്ങളുടെ കൃത്യം

കൃത്യം കൃത്യം: 15/1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

12, 13A, 13B, 14, 15A, 15B, 16, കൃത്യം കൃത്യം

16/1, 2, 3, 4, 5, 6, 7. കൃത്യം കൃത്യം 1.65-5

കൃത്യം കൃത്യം കൃത്യം കൃത്യം. കൃത്യം കൃത്യം

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കൃത്യം കൃത്യം കൃത്യം കൃത്യം. കൃത്യം കൃത്യം

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കൃത്യം കൃത്യം

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2) കൃത്യം കൃത്യം 4, 127.

5, P. R.

6, D. S.

7, L. M. C. G. R. S.

8, S. P. S.

9, M. S. S.

10, M. K.

11, K. K.

12, S. S.

13, R. S.

14, N. S.

15- S. S.

16-

16, L.

17, J. V. J.

18, S. S.

19, S. S.

20, S. S.

21, P. K.

22, C. M.

23, R. S.

24, S. S.

25, S. S.

S. S.

S. S.

S. S.

m. சிவசுப்பிரமணியன்

கிருஷ்ண குமார்

பி. பழனிமணி

R. K.

பஞ்சவர்ண

சுமதி

K. Dharmaraj

S. Anandaraman

(9th Floor)

K. Kumar

சென்னை
வருவாய் ஆய்வாளர்
குண்ணவாக்கம் குறுவட்டம்
உத்திரமேரூர் வட்டம்

S. Chellam

K. Dharmaraj

429 பர

அம் பர

429 பர

வரகம்

சென்னை

பரவட்டம்

M. சரஸ்வதி

சென்னை

பர

சென்னை

சென்னை

சென்னை

KUBERAN EXPLOSIVES & CO

Explosives Blasting Contractors & Dealers

Plot No. 1, Meenakshi Avenue, 3rd Cross Street, Old Perungalathur, Chennai – 600063

Tele Fax No: 2276 1987, Cell No: 9444814614, 9941181779.

E.mail ID: dhanamexplo1@yahoo.com

Date- 04-01-2023

M/S. MURUGAPPA BLUE METALS

Proprietor Mr.R.Sivakumar S/o Ramalingam

No.3, Bagavath Singh Nagar,
Thirutheri, Singaperumal Koil,
Chengalpattu.

Sub : Regarding Blasting work using Explosive in your proposed Quarry.

Dear Sir,

With reference to the subject, we would like to introduce our self that we are having Explosive License in Form 22 No. E/HQ/TN/22/298(E56920) situated in Survey No. 592/2B 1A , 164 Arungunam Village, Madhurandagam Taluk, Kancheepuram District and our office functioning at: Address No. 1 Meenakshi Avenue, 3rd Cross Street, Old Perungalathur, Chennai Tamilnadu- 600063.

We are enacting Explosive Vans separately for Transporting Class 2 Explosives and Class 6 Detonators from our Magazine to your work site. We engaged well experienced Licensed Blasters and Shot Firer for safe Blasting work since 6 Years. We are carrying the Blasting work without untoward any incident.

We are willing to undertake Blasting work on Contract basis at your proposed Quarry at SF. No. 15/1, 15/2, 15/3, 15/4, 15/5, 15/6, 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3, 16/4, 16/5, 16/6 and 16/7 over in 1.65.50 Hectors in Sirumailur Village, Uthiramerur Taluk, Kancheepuram District, Tamilnadu.

Thanking You,

Yours Faithfully

For KUBERAN EXPLOSIVES & CO.

Authorized Signatory

Encl: Explosives License.





भारत सरकार | Government of India
 वाणिज्य और उद्योग मंत्रालय | Ministry of Commerce & Industry
 पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो) | Petroleum & Explosives Safety Organisation (PESO)
 पूर्व नाम- विस्फोटक विभाग | Formerly- Department of Explosives
 A और D - विंग, ब्लॉक 1-8, दूसरा तल, शास्त्री भवन | A & D - Wing, Block 1-8, IInd Floor, Shastri Bhavan
 26 हड्डोउस रोड, नुंगम्बक्कम चेन्नै | 26 Haddous Road, Nungambakkam Chennai 600006
 फोन (Phone):- 28281023 | फैक्स (Fax):- 28284848
 ई-मेल Email: jicochennai@explosives.gov.in

संख्या (No.): E/HQ/TN/22/298(E56920)

दिनांक (Date): 07/04/2021

सेवा में To,

M/s. Kuberan Explosives & Co.,
 D. No. 164, Varanavasi Village, Barrutti (Post), Thennert (Via), Town/Village - Kanchipuram
 District-KANCHIPURAM, State-Tamil Nadu, Pincode -

08 APR 2021

विषय: Survey No(s).592/2B 1A, ग्राम 164, Arugunam village, Madurantakam Taluk, जिला KANCHIPURAM, राज्य Tamil Nadu में विस्फोटक के मेगजीन में उपयोग के लिए कब्जा हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-3 में जारी अनुज्ञप्ति सं E/HQ/TN/22/298(E56920) के नवीनीकरण संदर्भ में।
 Subject: Possession for Use of Explosives from magazine situated at Survey No(s):592/2B 1A, 164, Arugunam village, Madurantakam Taluk, Dist. KANCHIPURAM, Tamil Nadu -Licence No.: E/HQ/TN/22/298(E56920) granted in Form LE-3 of Explosives Rules, 2008 - Renewal regarding

महोदय | Sir,

आपका उपरोक्त विषय पर पत्र संख्या X दिनांक 23/03/2021 का संदर्भ ग्रहण करें। विस्फोटक नियम, 2008 के अंतर्गत प्रारूप LE-3 में जारी अनुज्ञप्ति दिनांक 31/3/2026 तक नवीनीकृत कर इस पत्र के साथ भेजी जा रही है।
 Reference to your letter No. X dated: 23/03/2021, the subject licence duly renewed upto 31/3/2026 and issued in Form LE-3 of Explosives Rules, 2008 is forwarded herewith.

अनुज्ञप्ति के आगामी नवीकरण हेतु कृपया निम्नलिखित दस्तावेज दिनांक 31/03/2026 से पहले इस कार्यालय को भेजे जाएं।
 For further renewal of licence, please submit the following documents so as to reach this office on or before 31/3/2026.

- प्रारूप आरई-1 में विधिवत पूर्ण एवं हस्ताक्षरित आवेदन।
Application in Form RE-1 duly filled in and signed.
- एक से पाँच वर्ष के अनुज्ञप्ति शुल्क का, विस्फोटक नियम, 2008 के तहत ऑनलाइन आवेदन पोर्टल पर उपलब्ध ई-भुगतान सुविधा के माध्यम से लाइसेंस शुल्क ऑनलाइन जमा किया जाना है।
Licence fees renewable for one to five years, to be submitted online through e-payment facility available on online application portal under the Explosives Rules, 2008.
- अनुमोदित प्लान के साथ मूल अनुज्ञप्ति।
Original licence with approved plan.
- कृपया इस संबंध में विस्फोटक नियम, 2008 के नियम 112 का भी संदर्भ ग्रहण करें।
In this connection, please also refer to Rule 112 of Explosives Rules, 2008.
- विस्फोटकों के क्रय हेतु आरई-11 में मांगपत्र (इंडेंट) आपूर्तिकर्ता को दिया जाए और उसी की एक प्रति इस कार्यालय को भेजी जाए (आतिशबाजी गोदाम के लिए लागू नहीं)।
Indent for purchase of explosives shall be placed in RE-11 with the supplier and copy of the same shall be sent to this office. (Not applicable for fireworks store house)
- कृपया विस्फोटकों की त्रैमासिक विवरणी हर तिमाही के अंत में आरई-7 में प्रस्तुत की जाए। विवरणी इस कार्यालय के कार्यालय में आगामी तिमाही के 10 तारीख से पहले पहुंच जानी चाहिए (आतिशबाजी गोदाम के लिए लागू नहीं)। Please submit quarterly returns of explosives in RE-7 at the end of every quarter so as to reach this office by 10th of the succeeding quarter. (Not applicable for fireworks store house)
- सभी ब्लास्टिंग ऑपरेशन एक सक्षम द्वारा की जाएगी जो उपरोक्त नियमों के तहत एक वैध शॉट फायर प्रमाणपत्र धारक हो। हालांकि, खान अधिनियम 1952 के अधीन आने वाले खानों में ब्लास्टिंग ऑपरेशन करने वाले ब्लास्टर की योग्यता उसी अधिनियम से निर्धारित हो।
All blasting operations shall be carried out by a competent person holding a valid shot firer's permit granted under above rules. However, blasting operations in mines coming under the purview of the Mines Act 1952, the blaster shall have qualifications prescribed in the regulations framed under the said Act.

भवदीय | Your's faithfully

डॉ. ए. शेख हुसैन | Dr. A SHEKH HUSSAIN

उप विस्फोटक नियंत्रक | Dy. Controller of Explosives

कृते संयुक्त मुख्य विस्फोटक नियंत्रक | For Joint Chief Controller of Explosives

दक्षिणांचल, चेन्नै | South Circle, Chennai

प्रतोलापि प्राप्त | Copy Forwarded to:

1. जिला मजिस्ट्रेट (District Magistrate), KANCHIPURAM (Tamil Nadu)- सूचना के लिए (for information.)

कृते संयुक्त मुख्य विस्फोटक नियंत्रक | For Joint Chief Controller of Explosives
दक्षिणांचल, चेन्नै | South Circle, Chennai

(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क आदि के लिए हमारी वेबसाइट <http://peso.gov.in> देखें।)
 (For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

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अनुज्ञापित प्ररूप एल. ई.-3 | LICENCE FORM LE-3

(विस्फोटक नियम, 2008 का अनुसूची 4 के भाग 1 के अनुच्छेद 3(क) से (प) देखिए।)
(See article 3(a) to (d) of Part I of Schedule IV of Explosives Rules, 2008)(ग) उपयोग के लिए एक समय पर वर्ग 1, 2, 3, 4, 5 या वर्ग 7 के विस्फोटक या किसी मैगजीन में वर्ग 6 के विस्फोटक रखें।
Licence to possess : (c) for use, explosives of class 1, 2, 3, 4, 5, 6 or 7 in a magazineअनुज्ञापित सं. (Licence No.): E/HQ/TN/22/298(E56920)
वार्षिक फीस रूपए (Annual Fee Rs): 12400/-

1. Licence is hereby granted to

M/s. Kuberan Explosives & Co. (अधिधारी / Occupier : K. Dhana Koteswararao), D. No. 164, Varanavasi Village, Rameswari (Post), Theencci (Via), Town/Village - Kanchipuram, District-KANCHIPURAM, State-Tamil Nadu, Pincode -

को अनुज्ञापित अनुदत्त की जाती है।

2. अनुज्ञापितारी की प्रारिथिता | Status of licensee : Individual

3. अनुज्ञापित निम्नलिखित प्रयोजनों के लिए विधिमार्ग है।
Licence is valid only for the following purpose4. अनुज्ञापित विस्फोटकों के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिमार्ग है।
Licence is valid for the following kinds and quantity of explosives: - (फ) (ग)

Sr. No.	Name and Description	Class & Division	उप-प्रभाग Sub-division	मात्रा किसी एक समय में Quantity at any one time
1.	Nitrate Mixture	2.0	0	6400 Kg.
2.	Detonating Fuse	6.2	0	50000 Mtrs
3.	Detonators	6.3	0	44000 Nos.

(ख) किसी एक कलेंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा (अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञापित के लिए)
(b) Quantity of explosives to be purchased in a calendar month (applicable for licensee under article 3(b) and (c)) :20 times
as above.5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञापित परिसर की पुष्टि होती है।
The licensed premises shall conform to the following drawing(s) :रेखाचित्र क्र. (Drawing No.) E/HQ/TN/22/298(E56920)
दिनांक (Dated) 10/01/2012

6. अनुज्ञापित परिसर निम्नलिखित पते पर स्थित हैं। The licensed premises are situated at following address:

Survey No(s), 592/2B 1A, ग्राम (Town/Village) : 164, Arugunam village, Madurantakam Taluk
जिला (District) KANCHIPURAM
दूरभाष (Phone) 9444814614राज्य (State) Tamil Nadu
ई-मेल (E-Mail)पोलिस थाना (Police Station) : Madurantakam
पिनकोड (Pincode)
फैक्स (Fax)7. अनुज्ञापित परिसर में निम्नलिखित सुविधाएँ अंतर्भूत हैं।
The licensed premises consist of following facilities

a main magazine room, a lobby and a detonators store room.

8. अनुज्ञापित समझ - समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपबंधों के अधीन रहते हुए अनुदत्त की जाती है।
The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and the following Annexures.

- उपरोक्त क्रम सं. 5 में यथा कथित रेखाचित्र (स्थान, संरचनात्मक संबंधों और अन्य विवरण दर्शाते हुए)।
Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
- अनुज्ञापित प्राधिकारी द्वारा संशुद्धित इस अनुज्ञापित की शर्तों और अतिरिक्त शर्तों।
Conditions and Additional Conditions of this licence signed by the licensing authority.
- दूरी प्ररूप DE-2 | Distance Form DE-2.

9. यह अनुज्ञापित तारीख 31 मार्च 2012 तक विधिमार्ग रहेगी। This licence shall remain valid till 31st day of March 2012.

यह अनुज्ञापित, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची V के भाग 4 के प्रति निर्दिष्ट सेट-VII के अधीन तथा उपरोक्त इस अनुज्ञापित की शर्तों का अधिकरण करने या यदि अनुज्ञापित परिसर योजना या उसके संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलंबित या प्रतिबंधित की जा सकती है, जहाँ यह लागू हो।

This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VIII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

तारीख | The Date - 10/01/2012

मुख्य विस्फोटक नियंत्रक | Chief Controller of Explosives

Amendment :

- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 01/08/2012
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 08/03/2013
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 18/07/2014

नवीनीकरण के पुरांकन के लिए स्थान
Space for Endorsement of Renewalनवीनीकरण की तारीख
Date of Renewalसमाप्त की तारीख
Date of Expiryअनुज्ञापित प्राधिकारी का हस्ताक्षर और स्टाम्प
Signature of licensing authority and stamp

07/04/2021

31/03/2026

It. Chief Controller of Explosives, South Circle, Chennai

कानूनी चेतावनी : विस्फोटकों को गलत ढंग से चलाने या उनका दुरुपयोग विधि के अधीन गंभीर दंडित अपराध होगा।
Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.

அனுப்புநர்
திருஜாகுணசேகரன்,
வட்டாட்சியர்,
உத்திரமேரூர்.

பெறுநர்

உதவி இயக்குனர் (பொ) புவியியல் மற்றும்
கரங்கத்துறை காஞ்சிபுரம்

ந.க.எண்.1405/2021/அ1,நாள். 27.02.2023

அய்யா,

பொருள்: கனிமங்களும் குவாரிகளும் - சாதாரண கற்கள் மற்றும்
கிராவல் மண் - காஞ்சிபுரம் மாவட்டம் - உத்திரமேரூர் வட்டம் - நெ
84 சிறுமையிலூர் கிராமம் - பட்டா எண்கள்.15/1, (0.09.0), மற்றும்
சில - மொத்த பரப்பு 1.65.50 ஹெக்டேர் பட்டா நிலத்தில் சாதாரண
கற்கள் மற்றும் கிராவல் மண் வெட்டியெடுக்க தி/ள்.முருகப்பா
புளுமெட்டல்ஸ் நிறுவனத்தினர் சார்பாக பங்குதாரர்
திரு.சிவக்குமார் த/பெ.ராமலிங்கம் என்பவர் தமிழ்நாடு சிறு
கனிம சலுகை விதிகள் 1959 விதி எண்.19 (1) கீழ் பத்து
ஆண்டுகளுக்கு மனு செய்தது - 300 மீ சுற்றளவில் குடியிருப்பு
இல்லை என சான்று கோருதல் - தொடர்பாக.

- பார்வை 1. இவ்வலுவலக ந.க.எண்.1405/2021/அ1 நாள்.18.10.2021 மற்றும்
11.04.2022
2. உதவி இயக்குனர் புவியியல் மற்றும் கரங்கத்துறை
காஞ்சிபுரம் அவர்களின் கடிதம் 153/க்யூ/1/2021, நாள்
16.02.2023
3. தி/ள் முருகப்பா புளுமெட்டல்ஸ் நிறுவனத்தின்
பங்குதாரர்களில் ஒருவரான திரு.சிவக்குமார் த/பெ
ராமலிங்கம் என்பவரின் வாக்குமூலம் நாள் 24.02.2023.

காஞ்சிபுரம் மாவட்டம், உத்திரமேரூர் வட்டம் நெ.84 சிறுமையிலூர் கிராமம்,
புன்செய் புல எண் 15/1.2 மற்றும் சில புன்செய் புல எண்களின் மொத்த
விஸ்தீரணம் 1.65.5 ஹெக்டேர்ஸ் ஏர்ஸ் (4.09 ஏக்கர்) பட்டா நிலங்களில் சாதாரண
கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க தி/ள். முருகப்பா புளுமெட்டல்ஸ்
நிறுவனத்தின் பங்குதாரர்களில் ஒருவரான திரு.சிவக்குமார் த/பெ ராமலிங்கம்

என்பவர் மாவட்ட ஆட்சியர் அவர்களிடம் மனு அளித்தது தொடர்பாக பார்வை 2-ல் காணும் உதவி இயக்குநர் புவியியல் மற்றும் சுரங்கத்துறை காஞ்சிபுரம் அவர்களின் கடிதம் மூலம் மீள அறிக்கை அனுப்புகோரியது தொடர்பாக எனது விசாரணை அறிக்கையினை பின்வருமாறு சமப்பிக்கிறேன்.

காஞ்சிபுரம் மாவட்டம், உத்திரமேரூர் வட்டம் நெ.84 சிறுமையிலூர் கிராமம், புன்செய் புல எண்கள் 15/1(p). (0.05.12), 15/2(p). (0.05.02), 15/3(p). (0.01.57), 15/4(p). (0.01.22), 15/5(p). (0.01.08), 15/6(p). (0.01.08), 15/7(0.14.0), 15/8(0.07.0), 15/9(0.07.5), 15/10(0.15.0), 15/11(0.01.0), 15/12(0.05.5), 15/13A(0.02.0), 15/13B(0.03.05), 15/14(0.06.0), 15/15ள(0.04.0), 15/15B(0.01.5), 15/16 (0.05.0), 16/1(0.01.5), 16/2(0.01.5), 16/3 (P) (0.16.90), 16/4(p)(0.09.05), 16/5(p) (0.12.70), 16/6 (p)(0.03.52) மற்றும் 16/7 (0.08.0) மொத்த பரப்பு 1.39.81 ஹெக்டேர் (3.45 ஏக்கர்) பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் மண் வெட்டி எடுக்க தி/ள் முருகப்பா புளுமெட்டல்ஸ் நிறுவனத்தின் பங்குதாரர் திரு.சிவக்குமார் த/பெ ராமலிங்கம் என்பவருக்கு தங்கள் அலுவலக 15.12.2022 நாளிட்ட கடிதத்தின் மூலம் சுரங்கத்திட்டம் ஏற்பளிப்பு செய்யப்பட்டுள்ளது.

மேற்படி மொத்த விஸ்தீரணத்தில் (1.65.5)ஹெக்டேர் நிலத்தில் 300 மீட்டர் சுற்றளவில் குடியிருப்பு, கோயில், மதுதி, பள்ளிக்கூடம் ஏதும் இருக்கக்கூடாது என்ற நிபந்தனைக்காக மனுதாரர் துவங்க இருக்கும் கல்குவாரி நிலத்தில் 10 மீட்டர் விட்டுவிட சம்மதித்து உத்திரமேரூர் வட்டாட்சியர் முன்பாக 24.02.23 அன்று நேரில் ஆஜராகி பார்வை 3-ல் கண்ட கடிதத்தில் வாக்குமூலம் அளித்துள்ளார்.

தி/ள் முருகப்பா புளுமெட்டல்ஸ் நிறுவனத்தின் பங்குதாரர்களில் ஒருவரான திரு.சிவக்குமார் த/பெ ராமலிங்கம் என்பவர் மேற்படி கல்குவாரி அமைய உள்ள இடத்தில் சுமார் 10 மீட்டர் இடைவெளி விடும்பட்சத்தில் குவாரி அமைய உள்ள புலத்திலிருந்து 300 மீட்டர் சுற்றளவில் குடியிருப்பு, கோயில், மதுதி, பள்ளிக்கூடம் ஏதும் வராது என இதன்மூலம் சான்றளிக்கிறேன் என்பதை தெரிவித்துக்கொள்கிறேன்.

தங்கள் உண்மையுள்ள

Dr. [Signature] 21/2/23
வட்டாட்சியர்
உத்திரமேரூர்.

TOPOGRAPHICAL VIEW OF SIRUMAILOUR
ROUGH STONE AND GRAVEL QUARRY LEASE APPLIED AREA



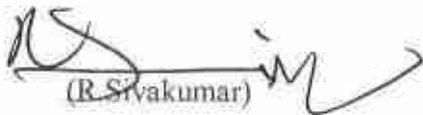
Name of the Applicant : **Tvl. Murugappa Blue Metals,**
Partner Thiru.R.Sivakumar,
S/o. Ramalingam,
Address : No.3, Bhagavatsingh Nagar, Thirutheri,
Singaperumal Koil, Chengalpattu Taluk & District,
Tamil Nadu State – 603 204.

LOCATION DETAILS


Extent : 1.39.81 ha
S.F.Nos. : 15/1 (P), 2 (P), 3 (P), 4 (P), Etc.,
Village : Sirumailour
Taluk : Uthiramerur
District : Kancheepuram
State : Tamil Nadu

Signature of the applicant

For Tvl. Murugappa Blue Metals


(R.Sivakumar)

(Partner & Authorized Person)


(Village Administrative Officer)
கிராம நிர்வாக அலுவலர்
Attestation
நெ.ப.உ. சிறுவையிலா கிராமம்
உதகமலை வட்டம்



Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), Tamil Nadu)

To,

The Owner
MUTHURAJ L
S/o.Lakshmanan,
No.17/32, Nehru Highway,
B.V.Nagar, High Road,
Nanganallur, Chennai -600061

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/TN/MIN/63076/2021 dated 29 Jul 2022. The particulars of the environmental clearance granted to the project are as below.

1. EC Identification No.	EC23B001TN134676
2. File No.	7696
3. Project Type	New
4. Category	B1
5. Project/Activity including Schedule No.	1(a) Mining of minerals
6. Name of Project	Roughstone and Gravel Quarry of Thiru L.Muthuraj
7. Name of Company/Organization	MUTHURAJ L
8. Location of Project	Tamil Nadu
9. TOR Date	01 Jan 1900

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 04/04/2023

(e-signed)
Thiru.Deepak S.Bilgi
Member Secretary
SEIAA - (Tamil Nadu)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

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THIRU.DEEPAK S.BILGI, I.F.S.
MEMBER SECRETARY

**STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY-TAMILNADU**
3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet,
Chennai - 600 015.
Phone No. 044-24359973
Fax No. 044-24359975

ENVIRONMENTAL CLEARANCE

Lr. No. SEIAA-TN/F.No.7696/EC.No:5602/2020 dated:14.03.2023

Sir/Madam,

Sub: SEIAA-TN – Proposed Rough stone & Gravel quarry lease over an extent of 1.40.98Ha in S.F.No 114/1, 114/2, 114/3, 114/4, 114/5, 114/6, 114/7, 114/8, 114/9B and 115, Padur Village, Uthiramerur Taluk, Kanchipuram District, Tamil Nadu by Thiru.L.Muthuraj– issue of Environmental Clearance – Regarding.

- Ref:**
1. Lr No. TN/F.No.7696/SEAC/TOR-978/2020 Dt. 5.7.2021
 2. Public hearing conducted on 27.1.2022
 3. Online Proposal No. SIA/TN/MIN/63076/2021 Dt. 29.03.2022
 4. Your Application for Environmental Clearance dated: 29.03.2022
 5. Minutes of the 291st meeting of SEAC held on 01.07.2022
 6. Proponent reply dated:
 7. Minutes of the 348th SEAC meeting held on 19.01.2023
 8. Letter from PCCF & CWW(FAC) Ref.No.WL.5/3767/2023, 15.02.2023
 9. Minutes of the 356th Meeting of SEAC held on 17.02.2023
 10. Minutes of the 602nd meeting of Authority held on 14.03.2023

Details of Minor Mineral Activity:-

This has reference to your application 3rd & 4th cited. The proposal is for obtaining Environmental Clearance for mining / quarrying of minor minerals based on the particulars furnished in your application as shown below.


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SEIAA-TN**

Sl. No	Details of the Proposal	
1.	Name of the Owner/Firm	Thiru.L.Muthuraj No.17/32, Nehru Highway B.V.Nagar , High Road Nanganallur Chennai - 600061
2.	Type of quarrying (/Rough Stone/Sand/Granite)	Rough Stone & Gravel
3.	S.F No. Of the quarry site with area break-up	114/1, 114/2, 114/3, 114/4, 114/5, 114/6, 114/7, 114/8, 114/9B & 115
4.	Village in which situated	Padur
5.	Taluk in which situated	Uthiramerur
6.	District in which situated	Kanchipuram
7.	Extent of quarry (in ha.)	1.40.98Ha
8.	Period of quarrying proposed	5 years
9.	Type of mining	Opencast Semi Mechanized Mining Method
10.	Production (Quantity in m3)	Geological reserves: 4,21,860 m ³ of Rough stone & 14,062 m ³ of Gravel and the ultimate depth is 31m 5-year production (Restricted as per ToR) 93800 m ³ of Rough stone & 6786 m ³ of Gravel to a depth of 26m Annual peak production 19,380m ³ Rough stone and 4,002m ³ of Gravel.
11.	Latitude & Longitude of all corners of the quarry site	12°42'46" N to 12°42'54,"N 79°50'27"E to 79°50'32"E


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12.	Top Sheet No.	57-P/10, 13& 14
13.	Man Power requirement per day:	12 Nos.
14.	Precise area communication approved by the District Collector with date	Rc. No.386/Q3/2019, dated: 14.01.2020
15.	Mining Plan approved by the Assistant Director (i/c), Joint Director, Department of Geology and Mining with date	Rc. No.386/Q3/2019, dated: 26.02.2020
16.	Water requirement: 1. Drinking & domestic purposes (in KLD) 2. Dust suppression & Green Belt (in KLD)	2.5 KLD 1.0 KLD & 0.5 kld 0.5 KLD 0.5 KLD
17.	Power requirement a. Domestic Purpose	TNEB
18.	Depth of quarrying	26m
19.	Depth of water table	40-43m BGL
20.	Whether any habitation within 300m distance	No as per VAO letter
21.	Project Cost (excluding EMP cost)	Rs. 54,13,920/-
22.	EMP cost	Capital cost : Rs. 1629500 Recurring cost : Rs. 13,0,000/year Total- 76.30Lakhs/5 year
23.	CER cost	Rs.15. Lakhs
24.	AD mines 500m cluster letter by the Assistant Director, Department of Geology and Mining with date	Rc. No.386/Q3/2019, dated: 18.11.2020
25.	VAO certificate regarding 300m radius cluster	Letter furnished dated Nil
Validity:		
This Environmental Clearance is accorded for the quantity of 93800 m3 of Rough stone & 6786 m3 of Gravel up to depth of 26m as per the approved mining plan and is valid as per the approved		


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mine plan period and as per MoEF&CC's notification S.O.1533(E) dated.14.09.2006 and S.O. 1807(E) dated 12.04.2022.

The Proponent has furnished affidavit in Hundred Rupees stamp paper attested by the Notary stating that

AFFIDAVIT TO SEIAA-TAMILNADU

Thiru.L.Muthuraj S/o.Lakshmanan, No.17/32, Nehru Highway, B.V.Nagar, High Road, Nanganallur, Chennai- 600 061. Do hereby solemnly declare and sincerely affirm that, I have applied for getting environment clearance to SEIAA, Tamil Nadu for quarry lease for Rough Stone and Gravel quarry over an extent is 1.40,98 hectares of Patta land in S.F.Nos. 114/1, 114/2, 114/3, 114/4, 114/5, 114/6, 114/7, 114/8, 114/9B and 115 of Padur Village, Uthiramerur Taluk, Kanchipuram District, Tamil Nadu State,

1. I swear to state and confirm that within 10km area of the quarry site, we have applied for environmental clearance, the following is situated.
 - a. Protected areas notified under the wild life (Protection) Act, 1972 (NBWL).
Wildlife Sanctuary: Karikili Birds Sanctuary is Located 7.5 km south of the lease area. It is located outside the Eco sensitive zone vide letter Ref.No. WL5/3767/2023 dated 15.02.2023 issued by PCCF and CWLF & Ref. No.WL5/17723/2022 dated 26.10.2022.
 - b. No Critically polluted areas as notified by the central pollution control board constituted under water (Prevention and control of Pollution) Act 1974. is located.
 - c. Interstate boundaries and international boundaries within 10km radius from the boundary of the proposed site.
2. I will complete the following Corporate Environment Responsibility (CER) activities before commencement of the quarrying activities.

CER Activity	Project cost (Rs)	Revised CER cost (Rs)
Provision of following facilities in the Union Panchayat Primary School, Padur Village <ul style="list-style-type: none">• Plantation – 50Nos.• Toilet renovation,• Repair of drinking water facilities• Provision of Library rack with books	Rs.54,13,920/-	Rs.5,00,000/-


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3. Details of quarry within 500m radius from the applied area

S.F.No	Name of the owner	Village	S.F.No	Extent	Lease Period	Remarks
a. Existing Quarries						
1	D.Nandhakumar, S/o.Devadas, M/s.Murugappa Blue Metals, Thirutheri Village, Singaperumal Kovil, Chengalpattu Taluk, Kancheepuram District	Sirumallur	11/1, 2A, 2B, 12/1, 2, 3, 4 & 5	3.92.50Ha	08.12.2017 to 07.12.2022	Operat ion
a. Abandoned Quarries						
1	P.Ashokkumar, S/o.Parameshwaran, TVH Ompinus, Square, No.127, Brikiline Road, Purasawakkam, Chennai-7	Padur	131/1	1.62.00	07.06.2013 to 06.06.2018	Lease Expire d
b. Proposed Quarries						
1	Thiru.L.Muthuraj, S/o.Lakshmanan, No.17/32, Nehru Highway, B.V.Nagar, High Road, Nanganallur, Chennai- 600 061.	Padur	S.F.Nos. 114/1, 114/2,114/3,114 /4, 114/5, 114/6,114/7,114 /8, 114/9B and 115	1.40.98 Ha	-	Under Processing (Present application)

The total lease within the 500m radius (Proposed + Existing) (1no + 1no) works out to 5.33.48ha including this lease area. **As such cluster situation is applicable and TOR for this project is applied.**

- There will not be hindrance or disturbance to the people living no enrooted/ nearby our quarry site while transporting the mineral and due to quarrying activities.
- There is no approved habitation within 300m radius from the periphery of our quarry.


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6. I swear that afforestation will be carried out during the course of quarrying operation and maintained.
7. The required insurance will be taken in the name of the laborers working in our quarry site.
8. The existing road from the main road to quarry is in good condition and the same will be maintained and utilized for Transportation of Rough Stone and Gravel.
9. I will not engage any child labor in our quarry site and I aware that engaging child labor is punishable under the law.
10. All types of safety / protective equipment will be provided to all the laborers working in our quarry.
11. No permanent structures, temple etc., are located within 500m radius from the periphery of our quarry.

I ensure to do the social and Environment commitment as mentioned in the Mining plan to the best of our knowledge.

Details of 500M radius Proposed quarry:

The Project Proponent has submitted a copy of the letter obtained from the Assistant Director, Department of Geology & Mining, Kancheepuram District in his Re. No.386/Q3/2019, dated: Re. No.386/Q3/2019, dated: 18.11.2020 has stated that the details of other quarries (Proposed / Existing / Abandoned Quarries) within a radius 500m from the boundary of the proposed quarry site as follows:

S.F.No	Name of the owner	Village	S.F.No	Extent	Lease Period	Remarks
b. Existing Quarries						
1	D.Nandhakumar, S/o.Devadas, M/s.Murugappa Blue Metals, Thirutheri Village, Singaperumal Kovil, Chengalpattu Taluk, Kancheepuram District	Sirumallur	11/1, 2A, 2B, 12/1, 2, 3, 4 & 5	3.92.50Ha	08.12.2017 to 07.12.2022	Operat ion
c. Abandoned Quarries						
1	P.Ashokkumar, S/o.Parameshwaran, TVH Ompinus, Square, No.127,	Padur	131/1	1.62.00	07.06.2013 to 06.06.2018	Lease Expire d


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	Brikiline Road, Purasawakkam, Chennai-7					
d. Proposed Quarries						
1	Thiru.L.Muthuraj, S/o.Lakshmanan, No.17/32, Nehru Highway, B.V.Nagar, High Road, Nanganallur, Chennai- 600 061.	Padur	S.F.Nos. 114/1, 114/2,114/3,114 /4, 114/5, 114/6,114/7,114 /8, 114/9B and 115	1.40.98 Ha	-	Under Processing (Present application)

Appraisal by SEAC:-

Proposed Rough stone & Gravel quarry lease over an extent of 1.40.98 Ha in S.F.No 114/1, 114/2, 114/3, 114/4, 114/5, 114/6, 114/7, 114/8, 114/9B and 115, Padur Village, Uthiramerur Taluk, Kanchipuram District, Tamil Nadu by Thiru.L.Muthuraj - For Environmental Clearance. (SIA/TN/MIN/63076/2021 Dt. 29.03.2022)

The proposal was earlier placed for appraisal in the 291st meeting of SEAC held on 1.7.2022. The details of the project furnished by the proponent are available on the PARIVESH web portal (parivesh.nic.in).

The SEAC noted the following:

1. The project proponent, Thiru.L.Muthuraj has applied for Environmental Clearance for the proposed Rough stone & Gravel quarry lease over an extent of 1.40.98 Ha in S.F.No 114/1, 114/2, 114/3, 114/4, 114/5, 114/6, 114/7, 114/8, 114/9B and 115, Padur Village, Uthiramerur Taluk, Kanchipuram District, Tamil Nadu.
2. The project/activity is covered under Category "B1" of Item 1(a) "Mining of Mineral Projects" of the Schedule to the EIA Notification, 2006, as amended.
3. ToR issued vide Lr No. TN/F.No.7696/SEAC/TOR-978/2020 Dt. 5.7.2021.
4. Public hearing conducted on 27.1.2022.

The proposal was again placed in 348th SEAC meeting held on 19.01.2023. Based on the presentation made by the proponent SEAC noted that the proposed site is located 7.5 km from Karikili Bird


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sanctuary, hence the PP shall furnish the Clearance from SCNBWL vide MoEF OM FC-11/119/2020-FC dated 17 th May, 2022.

Now SEIAA has forwarded a representation received from the PP to SEAC for consideration. Hence, the proposal was again placed in 348th SEAC meeting held on 19.01.2023.

SEAC noted that, the SEAC has already deliberated on this matter and decided to direct the PP to get prior clearance from NBWL before considering this case. The decision was taken in accordance with MOEF&CC, O.M No. FCC 11/119/2020-FC dated 17.5.2022. The Memorandum considered two scenarios for the projects falling near the Protected Areas (PA). Under scenario one, where ESZ has been notified around a specific PA, activities proposed to be located within notified ESZ shall be regulated and governed by the ESZ Notification concerned. Further, activities prohibited under ESZ Notification shall not be undertaken. Under scenario two – which is relevant for the present proposal – in respect of Pas for which ESZ has not been notified or ESZ Notification is at draft stage, activities covered under the schedule of EIA notification 2006 and located within 10 km of PAs shall require consideration by the NBWL/ SCNBWL. In the present case, namely for Karikili sanctuary ESZ has not yet been notified. It is for this reason that PP has been directed to get clearance from NBWL as per the aforesaid OM.

During the meeting the PP made the following representations before the Committee, for reconsideration of the above decision of SEAC/SEIAA and considering his proposal without insisting on NBWL clearance.

1. Karikili Sanctuary has not been finally notified u/s 26A of Wild Life Act 1972, read with 1991 amendments to the Act, and so Karikili cannot be considered as a Sanctuary.
2. The boundary of Karikili Sanctuary cannot extend beyond the tank area (survey number 188), as processes u/s 19-26A have not been gone through and completed.
3. As per the reply given to the RTI query, the PCCF in his Ref No. WL5/15862/2022-7 dt. 12.01.2023 has furnished the following information.

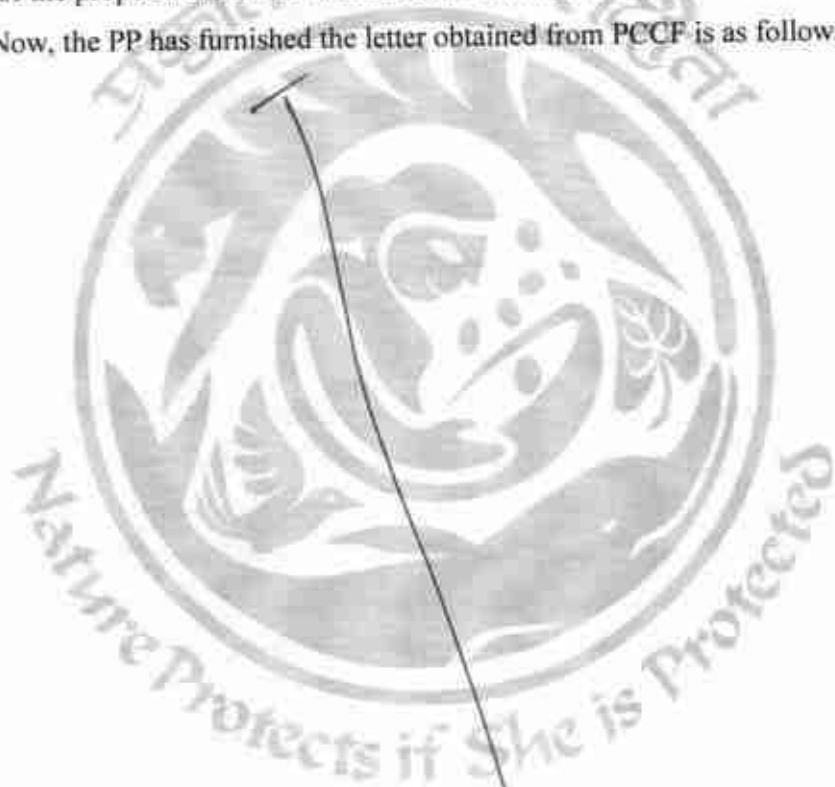
S.no.	Question	Reply
1.	What is the Eco Sensitive Zone (in Kilometer) of karikili birds Sanctuary,	As per the Hon'ble Supreme Court of India order dated 03.06.2022 in IA No. 1000 of 2003, the eco Sensitive Zone for Karikili and Vedanthangal Birds


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	Guindy National Park and Vedanthangal Birds Sanctuary	Sanctuary boundaries is 1 Km from the Sanctuary boundary and as a special case the Eco sensitive Zone for Guindy National Park is 'Zero' meter.
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SEAC carefully considered the above representations made by the PP and concluded that the above points were considered by SEAC before taking the decision. However, the PP requested that he may be granted further time to produce some additional documents. SEAC therefore decided to defer the reconsideration of the proposal till the PP submitted additional details.

Now, the PP has furnished the letter obtained from PCCF is as follows



[Handwritten Signature]
MEMBER SECRETARY
SEIAA-TN

TAMIL NADU FOREST DEPARTMENT

From
Thiru. Srinivas R Reddy, I.F.S.,
Principal Chief Conservator of Forests
and Chief Wildlife Warden (FAC),
Forest Head Quarters Building,
Guindy-Velachery Main Road,
Near Kanikapuram Check Post,
Chennai - 600 032.

To
The Member Secretary,
SEIAA-TN,
Panagal Maaligal,
Saidapet,
Chennai - 15.

Ref. No. WL5/3767/2023 dated 15-02-2023

Sir,

Sub: Eco Sensitive Zone - Zero Eco Sensitive Zone proposal submitted to Government of India - Approved by National Board for Wildlife - Applicability of the guidelines for sanctuaries - Consideration '0' Km Eco Sensitive Zone boundary for mining projects - Clarification - Regarding.

Ref: This office Ref. No. WL5/17723/2022 dated 26-10-2022

In continuation of this office reference cited, it is informed that the as per the G.O. (Ms.) No. 332, Environment and Forests (FRS) Department dated 23-05-1989, the Karikili Birds Sanctuary has been notified under section 18 of Wildlife (Protection) Act, 1972. The total extent is 151.26 acre or 61.21 Ha and belt of 5 Km width around in S.F. No. 188. Further it is informed that the final notification of Karikili Birds Sanctuary under section 26(A)(1) of Wildlife (Protection) Act, 1972 is under preparation by the District Collector.

2) Further the Eco Sensitive Zone proposal for Karikili Birds Sanctuary has been sent to Government of India through State Government. The proposed extent is 'zero meter'. Based on the above the Government of India, Ministry of Environment Forests and Climate Change, New Delhi has stated that the proposal has been considered in the Ministry and conveyed that in accordance with the decision of the National Board for Wildlife in its meeting held on 17-03-2005 and based on the proposal submitted by the State of Tamil Nadu, 'zero meter' Eco Sensitive Zone has been agreed vide letter F. No. 10-82/2014 WL dated 02-01-2015. Therefore separate Eco Sensitive Zone notification is not required.

Meanwhile Hon'ble Supreme Court in its Order dated 03.06.2022 in IA No. 1000 of 2003 states as below:-

"44. We accordingly direct:



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- b) In the event, however, the ESZ is already prescribed as per law that goes beyond one kilometer buffer zone, the wider margin as ESZ shall prevail. If such wider buffer zone beyond one kilometer is proposed under any statutory instrument for a particular national park or wildlife sanctuary awaiting final decision in that regard, then till such final decision is taken, the ESZ covering the area beyond one kilometer as proposed shall be maintained.
- c) The Principal Chief Conservator of Forests as also the Home Secretary of each State and Union Territory shall remain responsible for proper compliance of the said Guidelines as regards nature of use within the ESZ of all national parks and sanctuaries within a particular State or Union Territory.
- h) In respect of sanctuaries or national parks for which the proposal of a State or Union Territory has not been given, the 10 kilometers buffer zone as ESZ as indicated in the order passed by this Court on 4th December 2006 in the case of Goo Foundation (supra) and also contained in the Guidelines of 9th February 2011 shall be implemented. Within that area, the entire set of restrictions concerning an ESZ shall operate till a final decision in that regard is arrived at.*

Therefore as clarified in Para 2 it is informed that the Eco Sensitive Zone of Karikili Birds Sanctuary may be taken to 6 Kms from the Tank area. Beyond 6 Kms from the Tank, there is no restriction for any non forestry activities and also the question of default 10 Kms Eco Sensitive Zone does not arise.

This is for information.

Yours faithfully,


for Principal Chief Conservator of Forests
and Chief Wildlife Warden

✓ Copy to the Chairman, SEAC, Chennai for information.

Copy to the Chairman, SEIAA-TN, Chennai for information.

Copy to Thiru. V. Sekar, Chennai and 4 others.


15/02/23


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Now, the proposal was placed in this 356th Meeting of SEAC held on 17.02.2023. Based on the presentation and documents furnished by the project proponent, **SEAC noted the following**

- SEAC during its meeting has asked PP to obtain prior SCNBWL clearance for the project located within 10 km radial distance of Karikili Bird Sanctuary (KBS). The EcoSensitive Zone around the sanctuary is yet to be notified by GOI. The PP has represented for reconsideration and the proposal has been taken up in 356 SEAC meeting.
- Prior SCNBWL is required as per the following GOI OMs and directions issued in this regard:-
(a) GOI letter No. 10-83/2014 WL dated 02.07.2018, (b) GOI OM dated 17.05.2022, (c) GOI Ref F No. 6-30/2019 WL dated 06.05.2022, (d) GOI Ref F No. 6-30/2019 WL dated 21.07.2022, (e) GOI Ref F No. 11/20/2018 ESZ dated 19.06.2022.
- The above GOI references mention among others, the necessity and applicability of SCNBWL, availability of ESZ, notified ESZs or not notified ESZs etc.
- Govt of TN have submitted "Zero Meter" ESZ proposals to GOI for KBS and Govt of India have also agreed. However, notification under E.P. Act has not been issued yet.
- The PP during appraisal in 356 SEAC, has produced two letters issued by PCCF & CWLW. The PCCF & CWLW in his ref No. WL5/17723/2022 dated 26.10.2022 and WL5/1767/2023 dated 15.02.2023, has opined that ESZ notification is not required since GOI have already agreed for "Zero Meter" and fixed ESZ at 06 km distance from tank. But no notifications under E.P. Act either for "Zero Meter" or now decided "06 km from Tank" are made available to the committee.
- During the appraisal, two of the Members of the Committee expressed the view that the remarks of the PCCF & CWLW may not be given weightage over the requirements as per OM above and PP should obtain prior SCNBWL clearance for consideration of extant proposal. But, all other Members opined that the remarks of PCCF & CWLW – the highest authority of the Forest Department in the State - be given due importance. The Committee, after considering the contrasting views, decided to recommend proposal for issuance of EC, accepting the views of PCCF & CWLW, the statutory authority under the Wildlife Protection Act and heads the Wildlife Wing of the department.

The SEAC, after having considered all the above aspects, decided to recommend proposal for issuance of EC. Further, **SEAC to recommend the proposal for the grant of Environmental Clearance** for ultimate depth of mining restricted to 31m to 26 m BGL considering the


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environmental impacts due to the mining, safety of the working personnel and following the principle of the sustainable mining in the bottom bench. Consequently, the the SEAC recommends to grant the Environmental Clearance for the maximum minable quantities of **93,800 Cu.m of Rough stone & 6,786 cu.m of Gravel for a period of five years but however not exceeding the annual peak production of 19,380 cu.m of Rough Stone**, subject to the standard conditions as per the **Annexure I** of this minutes & normal conditions stipulated by MOEF &CC, in addition to the following specific conditions:

1. The prior Environmental Clearance granted for this mining project shall be valid for the project life including production value as laid down in the mining plan approved and renewed by competent authority, from time to time, subject to a maximum of thirty years, whichever is earlier **vide MoEF&CC Notification S.O. 1807(E) dated 12.04.2022.**
2. The mine manager and other statutory competent persons such as blaster (or) mine mate shall be appointed before the commencement of mining operation as per the provisions of Mines Act 1952 and Metalliferrous Mines Regulations, 1961.
3. The PP shall submit the 'Notice of Opening' of the quarry to the Regional Inspector/Director of Mines Safety, Chennai Region under the section 16 of the Mines Act, 1952 and in accordance with the Reg. 3 of MMR 1961 before obtaining the CTO.
4. The proponent shall construct the 'S3 (or) G2' type of fencing all around the boundary of the proposed working quarry with gates for entry/exit before the commencement of the operation as recommended in the DGMS Circular, 11/1959 and shall furnish the photographs/map showing the same before obtaining the CTO from TNPCB.
5. Since the quarry is located in the cluster, the Project Proponent shall ensure strict compliance of the provisions given under the Mines Rules, 1955 for the health and welfare of the persons employed therein.
6. The PP shall carry out the tree plantation to act as a barrier to reduce noise level and dust pollution along the boundary of the quarrying site considering the wind direction before obtaining the CTO from the TNPCB.
7. Further, the PP shall construct the garland drain with proper size, gradient and length along the boundary of the pit leaving behind the mandatory safety zone of 7.5 m as it is designed to take care of run-off water (size, gradient and length).


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8. The Project Proponent shall furnish slope stability action plan to the concerned AD (Mines) considering the existing working conditions of 13 m highwall bench by maintaining appropriate safe width for the same and incorporating the haul road with proper gradient as the depth of the proposed quarry is exceeding 30 m, before obtaining CTO from TNPCB.
9. However, the PP shall carry out the scientific studies to assess the slope stability of the benches and quarry wall when the depth of the quarry touches 30 m (or) within the commencement of two years of quarrying operation whichever is earlier, by involving any of the reputed Research and Academic Institution such as CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM, IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus, etc. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, AD/Mines-DGM and DMS, Chennai as a part of Environmental Compliance without any deviation.
10. Within one year of the commencement of mining operations, the Project Proponent shall carry out the scientific studies on 'Cumulative Impacts of the blasting operations carried out in the cluster mines on the surrounding villages and the prominent structures situated within 1 km from the boundary of the quarry such as blast-induced ground/air vibrations and fly rock', by involving a reputed Research and Academic Institution such as CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM, IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus, etc. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, AD/Mines-DGM and DMS, Chennai as a part of Environmental Compliance without any deviation.
11. As a part of EC Compliance, the PP shall carry out the tree plantation to act as a barrier to reduce noise level and dust pollution along the boundary of the quarrying site considering the wind direction before obtaining the CTO from the TNPCB.
12. No 'Deep-hole large diameter drilling and blasting' is permitted in the proposed quarries.
13. As the habitations are located nearby, the PP shall carry out the controlled blasting using jack hammer drilled shallow holes (32-34 mm dia& 1.5 m length) only and NONEL shock tube initiation system with muffling techniques to ensure the environmentally acceptable blasting operation.
14. The PP shall carry out maximum of two rounds of controlled blast only per day, restricted to the maximum of 50 to 60 number of holes per round with maintaining maximum charge per


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- delay in such a manner that the blast-induced ground vibration level (Peak Particle Velocity) measured in the houses/structures located at a distance of 300 m shall not exceed 2.0 mm/s and no fly rock shall travel beyond 10 m from the site of blasting. The PP shall also ensure that the blasting operation shall be carried out once in 2 days to reduce the environmental impacts effectively.
15. Since the quarry lies in a cluster situation, the PP shall furnish a Standard Operating Procedure for carrying out the safe method of carrying out the blasting operation to the concerned DEE/TNPCB before obtaining the CTO from the TNPCB while considering the adjacent quarries lies in a radial distance of 500 m from their quarry.
 16. The PP shall use the jack hammer drill machine fitted with the dust extractor for the drilling operations such that the fugitive dust is controlled effectively at the source.
 17. The PP shall ensure that the blasting operations are carried out by the blaster/Mine Mate/Mine Foreman employed by him only as per the provisions of MMR 1961 and it shall not be carried out by the persons other than the above statutory personnel.
 18. The PP shall ensure that the blasting operations shall be carried out during a prescribed time interval with a prior notice to the school/other habitations situated around the proposed quarry after having posted the sentries/guards adequately to confirm the non-exposure of public within the danger zone.
 19. The PP shall meticulously carry out the mitigation measures as spelt out in the revised EMP.
 20. The PP shall carry out the comprehensive hydrogeological studies once in two years to assess the quality & quantity of the ground water due to impacts of quarrying operation by involving any of the reputed Research and Academic Institution such as CSIR-Central Institute of Mining and Fuel Research / Dhanbad, NIRM, IIT-Madras, NIT-Dept of Mining Engg, Surathkal, Anna University Chennai-Dept of Geology, CEG Campus, and University of Madras -Dept of Applied Geology, Chennai etc shall be carried out before the commencement of mining operations. A copy of such scientific study report shall be submitted to the SEIAA, MoEF, TNPCB, and DMS, Chennai as a part of Environmental Compliance.
 21. The Project Proponent shall ensure that the funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose.


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Year-wise expenditure should be reported to the MoEF& CC Ministry and its Integrated Regional Office (IRO) located in Chennai.

22. The Project Proponent shall send a copy of the clearance letter marked to concerned Panchayat from whom any suggestion/representation has been received while processing the proposal.
23. As per the MoEF& CC Office Memorandum F.No. 22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall adhere EMP furnished.
24. **As accepted by the Project proponent the CER cost is Rs. 15.0 lakh and the amount shall be spent for the committed activities in Panchayat Union Primary school, Padur as committed, before obtaining CTO from TNPCB.**

ANNEXURE-I

1. The proponent shall mandatorily appoint the required number of statutory officials and the competent persons in relevant to the proposed quarry size as per the provisions of Mines Act 1952 and Metalliferrous Mines Regulations, 1961.
2. The proponent shall erect fencing all around the boundary of the proposed area with gates for entry/exit before the commencement of the operation and shall furnish the photographs/map showing the same before obtaining the CTO from TNPCB.
3. Perennial maintenance of haulage road/village / Panchayat Road shall be done by the project proponent as required in connection with the concerned Govt. Authority.
4. The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form of Short Term Permit (STP), Query license or any other name.
5. The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of


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slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

6. The proponent shall ensure that the slope of dumps is suitably vegetated in scientific manner with the native species to maintain the slope stability, prevent erosion and surface run off. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps.
7. Perennial sprinkling arrangement shall be in place on the haulage road for fugitive dust suppression. Fugitive emission measurements should be carried out during the mining operation at regular intervals and submit the consolidated report to TNPCB once in six months.
8. The Project Proponent shall carry out slope stability study by a reputed academic/research institution such as NIRM, IIT, Anna University for evaluating the safe slope angle if the proposed dump height is more than 30 meters. The slope stability report shall be submitted to concerned Regional office of MoEF&CC, Govt. of India, Chennai as well as SEIAA, Tamilnadu.
9. The Proponent shall ensure that the Noise level is monitored during mining operation at the project site for all the machineries deployed and adequate noise level reduction measures undertaken accordingly. The report on the periodic monitoring shall be submitted to TNPCB once in 6 months.
10. Proper barriers to reduce noise level and dust pollution should be established by providing greenbelt along the boundary of the quarrying site and suitable working methodology to be adopted by considering the wind direction.
11. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix in consultation with the DFO, State Agriculture University and local school/college authorities. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
12. Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted in proper escapements as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall


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earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner.

13. **Noise and Vibration Related:** (i) The Proponent shall carry out only the Controlled Blasting operation using NONEL shock tube initiation system during daytime. Usage of other initiation systems such as detonating cord/fuse, safety fuse, ordinary detonators, cord relays, should be avoided in the blasting operation. The mitigation measures for control of ground vibrations and to arrest fly rocks should be implemented meticulously under the supervision of statutory competent persons possessing the I / II Class Mines Manager / Foreman / Blaster certificate issued by the DGMS under MMR 1961, appointed in the quarry. No secondary blasting of boulders shall be carried out in any occasions and only the Rock-Breakers (or) other suitable non-explosive techniques shall be adopted if such secondary breakage is required. The Project Proponent shall provide required number of the security sentries for guarding the danger zone of 500 m radius from the site of blasting to ensure that no human/animal is present within this danger zone and also no person is allowed to enter into (or) stay in the danger zone during the blasting. (ii) Appropriate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs, (iii) Noise levels should be monitored regularly (on weekly basis) near the major sources of noise generation within the core zone.
14. Ground water quality monitoring should be conducted once in every six months and the report should be submitted to TNPCB.
15. The operation of the quarry should not affect the agricultural activities & water bodies near the project site and a 50 m safety distance from water body should be maintained without carrying any activity. The proponent shall take appropriate measures for "Silt Management" and prepare a SOP for periodical de-siltation indicating the possible silt content and size in case of any agricultural land exists around the quarry.
16. The proponent shall provide sedimentation tank / settling tank with adequate capacity for runoff management.
17. The proponent shall ensure that the transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village Road and shall take adequate safety precautionary measures while the vehicles are passing through the schools / hospital. The Project Proponent shall ensure that the road may not be damaged due to transportation of the quarried


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- rough stones; and transport of rough stones will be as per IRC Guidelines with respect to complying with traffic congestion and density.
18. To ensure safety measures along the boundary of the quarry site, security guards are to be posted during the entire period of the mining operation.
 19. After mining operations are completed, the mine closure activities as indicated in the mine closure plan shall be strictly carried out by the Proponent fulfilling the necessary actions as assured in the Environmental Management Plan.
 20. The Project proponent shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition that is fit for the growth of fodder, flora, fauna etc.
 21. The Project Proponent shall comply with the provisions of the Mines Act, 1952, MMR 1961 and Mines Rules 1955 for ensuring safety, health and welfare of the people working in the mines and the surrounding habitants.
 22. The project proponent shall ensure that the provisions of the MMRD, 1956, the MCDR 2017 and Tamilnadu Minor Mineral Concession Rules 1959 are complied by carrying out the quarrying operations in a skillful, scientific and systematic manner keeping in view proper safety of the labour, structure and the public and public works located in that vicinity of the quarrying area and in a manner to preserve the environment and ecology of the area.
 23. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be informed to the District AD/DD (Geology and Mining) District Environmental Engineer (TNPCCB) and the Director of Mines Safety (DMS), Chennai Region by the proponent without fail.
 24. The Project Proponent shall abide by the annual production scheduled specified in the approved mining plan and if any deviation is observed, it will render the Project Proponent liable for legal action in accordance with Environment and Mining Laws.
 25. Prior clearance from Forestry & Wild Life including clearance from committee of the National Board for Wildlife as applicable shall be obtained before starting the quarrying operation, if the project site attracts the NBWL clearance, as per the existing law from time to time.
 26. All the conditions imposed by the Assistant/Deputy Director, Geology & Mining, concerned District in the mining plan approval letter and the Precise area communication letter issued by concerned District Collector should be strictly followed.


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27. The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
28. The Project proponent shall install a Display Board at the entrance of the mining lease area/abutting the public Road, about the project information as shown in the **Appendix –II** of this minute.

Appendix -I
List of Native Trees Suggested for Planting

1. *Aeglemarmelos*-Vilyam
2. *Adenaantherapavonina*-Manjadi
3. *Albizialebeck*-Vaagai
4. *Albiziaamara*-Usil
5. *Bauhinia purpurea* - Mantharai
6. *Bauhinia racemosa* - Aathi
7. *Bauhinia tomentosa*-Iruvathi
8. *Buchananiaaillaris*-Kattuma
9. *Borassusflabellifer*- Parai
10. *Buteamonosperma* - Murukkamaram
11. *Bobaxceiba*- Ilavu, Sevvilavu
12. *Calophylluminophyllum* - Punnai
13. *Cassia fistula*- Sarakondrai
14. *Cassia roxburghii*- Sengondrai
15. *Chloroxylonsweitenia* - Purasamaram
16. *Cochlospermumreligiosum*- Kongu, Manjallavu
17. *Cordiadichotoma*- Mookuchalimaram
18. *Cretevaadansonii*-Mavalingum
19. *Dilleniaindica*- Uva, Uzha
20. *Dilleniapentagyna*- SiruUva, Sitruzha
21. *Diospyrosebenum*- Karungali
22. *Diospyroschloroxylon*- Vaganai
23. *Ficusamplissima*- Kalltchi


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24. *Hibiscus tiliaceus*–Aatrupoovarasu
25. *Hardwickiabinata*– Aacha
26. *Holoptelia integrifolia*-Aayili
27. *Lanneacoromandelica* - Odhiam
28. *Lagerstroemia speciosa* - Poo Marudhu
29. *Lepisanthustetraphylla*- Neikottaimaram
30. *Limonia acidissima* - Vila maram
31. *Litsea glutinosa*–Pisinpattai
32. *Madhucal longifolia* - Illuppai
33. *Manilkara hexandra*–UlakkaiPaalai
34. *Mimusops elengi* - Magizhamaram
35. *Mitragyna parvifolia* - Kadambu
36. *Morinda pubescens*–Nuna
37. *Morinda citrifolia*– VellaiNuna
38. *Phoenix sylvestre*-Eachai
39. *Pongamia pinnata*–Pungam
40. *Premna mollissima*– Munnai
41. *Premna serratifolia*– Narumunnai
42. *Premna tomentosa*-PurangaiNaari, PudangaNaari
43. *Prosopis cinerea* - Vannimaram
44. *Pterocarpus marsupium* - Vengai
45. *Pterospermum canescens*–Vennangu, Tada
46. *Pterospermum xylocarpum* - Polavu
47. *Puthranjiva roxburghii*–Puthranjivi
48. *Salvadora persica*– Ugaamaram
49. *Sapindus marginatus*- Manipungan, Soapukai
50. *Saraca asoca* - Asoca
51. *Strobilusa per*- Pirayamaram
52. *Strychnos nuxvomica*–Yetti
53. *Strychnos potatorum* - TherthangKottai
54. *Syzygium cumini* - Naval


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subject to the standard conditions as per Annexure - (I) of SEAC minutes, other normal conditions stipulated by MOEF&CC & all other specific conditions as recommended by SEAC in addition to the following conditions and the conditions in Annexure 'A' of this minutes.

1. As Karikili Bird Sanctuary is proximity of the project site, the Proponent should ensure the following,
 - i. Migratory pathway of Birds should not be disturbed.
 - ii. Roosting and Nesting habitation of birds should not be disturbed.
 - iii. Blasting, noise and vibration should not disturb the safety of the Birds, behavior and their habitation.
 - iv. The quarry operation should not fragment the bird's habitation.
 - v. More fruit bearing trees to be planted in and around the project site.
 - vi. No chemical and fertilizer to be used that can endanger the birds.
 - vii. The human footprint to be limited to prevent biodiversity loss particularly, Avian Biodiversity.
 - viii. The PP should support all Wildlife Awareness Program of the Forest Department to support conservation.
 - ix. As birds contribute to ecology & have direct bearing in well beings of local people and their livelihoods, there shall be minimum impact due to proposed mining activity and proposed mitigation measures shall be implemented as committed.
2. The prior Environmental Clearance granted for this mining project shall be valid for the project life including production value as laid down in the mining plan approved and renewed by competent authority, from time to time, subject to a maximum of thirty years, whichever is earlier vide MoEF&CC Notification S.O. 1807(E) dated 12.04.2022.
3. The EC granted is subject to review by District Collector, AD mines and TNPCB on completion of every 5 years till the project life. They should also review the EC conditions to ensure that they have all been adhered to and implemented.
4. The project proponent shall furnish a Certified Compliance Report obtained from MoEF&CC as per the O.M of MoEF&CC dated 08.06.2022 while executing a review of the mining plan every 5 years to District Collector, AD mines and TNPCB. If any violation/ non-compliance is observed, the concerned authority shall take necessary action against the project proponent


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and it shall also be brought to the notice of SEIAA for taking appropriate actions according to the Acts, Regulations, Notifications and Judgements in force. A copy of the review shall be sent to SEIAA/SEAC.

5. The progressive and final mine closure plan including the green belt implementation and environmental norms should be strictly followed as per the EMP and this should be reviewed by the District Collector, AD mines, & TNPCB every 5 years till the project life to ensure environmental sustainability.

Annexure 'A'

EC Compliance

1. The Environmental Clearance is accorded based on the assurance from the project proponent that there will be full and effective implementation of all the undertakings given in the Application Form, Pre-feasibility Report, mitigation measures as assured in the Environmental Impact Assessment/ Environment Management Plan and the mining features including Progressive Mine Closure Plan as submitted with the application.
2. All the conditions as presented by the proponent in the PPT during SEAC appraisal should be addressed in Full.
3. The proponent shall submit Compliance Reports on the status of compliance of the stipulated EC conditions including results of monitored data. It shall be sent to the respective Regional Office of Ministry of Environment, Forests and Climate Change, Govt. of India and also to the Office of State Environment Impact Assessment Authority (SEIAA).
4. Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

Applicable Regulatory Frameworks

5. The project proponent shall strictly adhere to the provisions of Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006,


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Wildlife Protection Act, 1972, Forest Conservation Act, 1980, Biodiversity Conservation Act, 2016, the Biological Diversity Act, 2002 and Biological diversity Rules, 2004 and Rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter

Safe mining Practices

6. The AD/DD, Dept. of Geology & Mining shall ensure operation of the proposed quarry after the submission slope stability study conducted through the reputed research & Academic Institutions such as NIRM, IITs, NITS Anna University, and any CSIR Laboratories etc.
7. The AD/DD, Dept. of Geology & Mining & Director General of Mine safety shall ensure strict compliance and implementation of bench wise recommendations/action plans as recommended in the scientific slope stability study of the reputed research & Academic Institutions as a safety precautionary measure to avoid untoward accidents during mining operation.
8. A minimum buffer distance specified as per existing rules and statutory orders shall be maintained from the boundary of the quarry to the nearest dwelling unit or other structures, and from forest boundaries or any other ecologically sensitive and archeologically important areas or the specific distance specified by SEIAA in EC as per the recommendations of SEAC depending on specific local conditions.

Water Environment – Protection and mitigation measures

9. The proponent shall ensure that the activity does not disturb the water bodies and natural flow of surface and groundwater, nor cause any pollution, to water sources in the area.
10. The proponent shall ensure that the activities do not impact the water bodies/wells in the neighboring open wells and bore wells. The proponent shall ensure that the activities do not in any way affect the water quantity and quality in the open wells and bore wells in the vicinity or impact the water table and levels. The proponent shall ensure that the activities do not disturb the river flow, nor affect the Odai, Water bodies, Dams in the vicinity.
11. Water level in the nearest dug well in the downstream side of the quarry should be monitored regularly and included in the Compliance Report.


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12. Quality of water discharged from the quarry should be monitored regularly as per the norms of State Pollution Control Board and included in the Compliance Report.
13. Rain Water Harvesting facility should be installed as per the prevailing provisions of TNMBR/TNCDBR, unless otherwise specified. Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.
14. Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the compliance reports to SELAA.
15. Regular monitoring of ground water level and water quality shall be carried out around the mine area during mining operation. At any stage, if it is observed that ground water table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.
16. Garland drains and silt traps are to be provided in the slopes around the core area to channelize storm water. De-silting of Garland canal and silt traps have to be attended on a daily basis. A labour has to be specifically assigned for the purpose. The proponent shall ensure the quality of the discharging storm water as per the General Effluent Discharge Standards of CPCB.

Air Environment – Protection and mitigation measures

17. The activity should not result in CO₂ release and temperature rise and add to micro climate alternations.
18. The proponent shall ensure that the activities undertaken do not result in carbon emission, and temperature rise, in the area.
19. The proponent shall ensure that Monitoring is carried out with reference to the quantum of particulate matter during excavation; blasting; material transport and also from cutting waste dumps and haul roads.

Soil Environment – Protection and mitigation measures

20. The proponent shall ensure that the operations do not result in loss of soil biological properties and nutrients.
21. The proponent shall ensure that activity does not deplete the indigenous soil seed bank and disturb the mycorrhizal fungi, soil organism, soil community nor result in eutrophication of soil and water.


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22. The activities should not disturb the soil properties and seed and plant growth. Soil amendments as required to be carried out, to improve soil health.
23. Bio remediation using microorganisms should be carried out to restore the soil environment to enable carbon sequestration.
24. The proponent shall ensure that the mine restoration is done using mycorrhizal VAM, vermin-composting, Biofertilizers to ensure soil health and biodiversity conservation.
25. The proponent shall ensure that the topsoil is protected and used in planting activities in the area.
26. The proponent shall ensure that topsoil to be utilized for site restoration and Green belt alone within the proposed area.
27. The top soil shall be temporarily stored at earmarked place (s) and used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. At critical points, use of geotextile shall be undertaken for stabilization of the dump. Protective wall or gabions should be made around the dump to prevent erosion / flow of sediments during rains. The entire excavated area shall be backfilled.

Noise Environment – Protection and mitigation measures

28. The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
29. The sound at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Hence, the PP shall ensure that the biological clock of the villages are not disturbed because of the mining activity.

Biodiversity - Protection and mitigation measures

30. The proponent should ensure that there is no disturbance to the agriculture plantations, social forestry plantations, waste lands, forests, sanctuary or national parks. There should be no impact on the land, water, soil and biological environment and other natural resources due to the mining activities.
31. No trees in the area should be removed and all the trees numbered and protected. In case trees fall within the proposed quarry site the trees may be transplanted in the Greenbelt


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zone. The proponent shall ensure that the activities in no way result in disturbance to forest and trees in vicinity. The proponent shall ensure that the activity does not disturb the movement of grazing animals and free ranging wildlife. The proponent shall ensure that the activity does not disturb the biodiversity, the flora & fauna in the ecosystem. The proponent shall ensure that the activity does not result in invasion by invasive alien species. The proponent shall ensure that the activities do not disturb the resident and migratory birds. The proponent shall ensure that the activities do not disturb the vegetation and wildlife in the adjoining reserve forests and areas around.

32. The proponent shall ensure that the activities do not disturb the agro biodiversity and agro farms. Actions to be taken to promote agroforestry, mixed plants to support biodiversity conservation in the mine restoration effort.
33. The proponent shall ensure that all mitigation measures listed in the EIA/EMP are taken to protect the biodiversity and natural resources in the area.
34. The proponent shall ensure that the activities do not impact green lands/grazing fields of all types surrounding the mine lease area which are food source for the grazing cattle.

Climate Change

35. The project activity should not in any way impact the climate and lead to a rise in temperature.
36. There should be least disturbance to landscape resulting in land use change, contamination and alteration of soil profiles leading to Climate Change.
37. Intensive mining activity should not add to temperature rise and global warming.
38. Operations should not result in GHG releases and extra power consumption leading to Climate Change.
39. Mining through operational efficiency, better electrification, energy use, solar usage, use of renewable energy should try to decarbonize the operations.
40. Mining Operation should not result in droughts, floods and water stress, and shortages, affecting water security both on site and in the vicinity.
41. Mining should not result in water loss from evaporation, leaks and wastage and should support to improve the ground water.




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42. Mining activity should be flood proof with designs and the drainage, pumping techniques shall ensure climate-proofing and socio-economic wellbeing in the area and vicinity.

Green Belt Development

43. The proponent shall ensure that in the green belt development more indigenous trees species (Appendix as per the SEAC Minutes) are planted.

44. The proponent shall ensure the area is restored and rehabilitated with native trees as recommended in SEAC Minutes (in Appendix).

Workers and their protection


45. The project proponent is responsible for implementing all the provisions of labour laws applicable from time to time to quarrying /Mining operations. The workers on the site should be provided with on-site accommodation or facilities at a suitable boarding place, protective equipment such as ear muffs, helmet, etc.

46. The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.

47. The workers shall be employed for working in the mines and the working hours and the wages shall be implemented/enforced as per the Mines Act, 1952.

Transportation

48. No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a bypass road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.


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49. The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

Storage of wastes

50. The project proponent shall store/dump the granite waste generated within the earmarked area of the project site for mine closure as per the approved mining plan.

CER/EMP

51. The CER Should be fully Implemented and fact reflected in the Half-yearly compliance report.

52. The EMP Shall also be implemented in consultation with local self-government institutions.

53. The follow-up action on the implementation of CER Shall be included in the compliance report.

Directions for Reclamation of mine sites

54. The mining closure plan should strictly adhere to appropriate soil rehabilitation measures to ensure ecological stability of the area. Reclamation/Restoration of the mine site should ensure that the Geotechnical, physical, chemical properties are sustainable that the soil structure composition is buildup, during the process of restoration.

55. The proponent shall ensure that the mine closure plan is followed as per the mining plan and the mine restoration should be done with native species, and site restored to near original status. The proponent shall ensure that the area is ecologically restored to conserve the ecosystems and ensure flow of goods and services.

56. A crucial factor for success of reclamation site is to select sustainable species to enable develop a self-sustaining eco system. Species selected should easily establish, grow rapidly, and possess good crown and preferably be native species. Species to be planted in


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the boundary of project site should be un palatable for cattle's/ goats and should have proven capacity to add leaf-litter to soil and decompose. The species planted should be adaptable to the site conditions. Should be preferably pioneer species, deciduous in nature to allow maximum leaf-litter, have deep root system, fix atmospheric nitrogen and improve soil productivity. Species selected should have the ability to tolerate altered pit and toxicity of and site. They should be capable of meeting requirement of local people in regard to fuel fodder and should be able to attract bird, bees and butterflies. The species should be planted in mixed association.

57. For mining area reclamation plot culture experiments to be done to identify/ determine suitable species for the site.
58. Top soil with a mix of beneficial microbes (Bacteria/Fungi) to be used for reclamation of mine spoils. AM Fungi (Arbuscular mycorrhizal fungi), plant growth promoting Rhizo Bacteria and nitrogen fixing bacteria to be utilized.
59. Soil and moisture conservation and water harvesting structures to be used where ever possible for early amelioration and restoration of site.
60. Top soil is most important for successful rehabilitation of mined sites. Topsoil contains majority of seeds and plant propagation, soil microorganism, Organic matter and plant nutrients. Wherever possible the topsoil should be immediately used in the area of the for land form reconstruction, to pre mining conditions.
61. Over burdens may be analyzed and tested for soil characteristics and used in the site for revegetation. Wherever possible seeds, rhizome, bulbs, etc of pioneering spices should be collected, preserved and used in restoring the site.
62. Native grasses seeds may be used as colonizers and soil binders, to prevent erosion and allow diverse self- sustaining plant communities to establish. Grasses may offer superior tolerance to drought, and climatic stresses.
63. Reclamation involves planned topographical reconstruction of site. Care to be taken to minimize erosion and runoff. Topsoils should have necessary physical, chemicals, ecological, properties and therefore should be stored with precautions and utilized for reclamation process. Stocked topsoil should be stabilized using grasses to protect from wind. Seeds of various indigenous and local species may be broad casted after topsoil and treated overburden are spread.


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64. Alkaline soils, acidic soils, Saline soils should be suitably treated/amended using green manure, mulches, farmyard manure to increase organic carbon. The efforts should be taken to landscape and use the land post mining. The EMP and mine closure plan should provide adequate budget for re-establishing the site to pre-mining conditions. Effective steps should be taken for utilization of over burden. Mine waste to be used for backfilling, reclamation, restoration, and rehabilitation of the terrain without affecting the drainage and water regimes. The rate of rehabilitation should be similar to rate of mining. The land disturbed should be reshaped for long term use. Mining should be as far as possible be ecofriendly. Integration of rehabilitation strategies with mining plan will enable speedy restoration.
65. Efforts should to taken to aesthetically improve the mine site. Generally, there are two approaches to restoration i.e Ecological approach which allows tolerant species to establish following the succession process allowing pioneer species to establish. The other approach i.e plantation approach is with selected native species are planted. A blend of both methods may be resorted to restore the site by adding soil humas and mycorrhiza.
66. Action taken for restoration of the site should be specifically mentioned in the EC compliances.

Directions for Reclamation of mine sites

1. The mining closure plan should strictly adhere to appropriate soil rehabilitation measures to ensure ecological stability of the area. Reclamation/Restoration of the mine site should ensure that the Geotechnical, physical, chemical properties are sustainable that the soil structure composition is buildup, during the process of restoration.
2. The proponent shall ensure that the mine closure plan is followed as per the mining plan and the mine restoration should be done with native species, and site restored to near original status. The proponent shall ensure that the area is ecologically restored to conserve the ecosystems and ensure flow of goods and services.
3. A crucial factor for success of reclamation site is to select sustainable species to enable develop a self-sustaining eco system. Species selected should easily establish, grow rapidly, and possess good crown and preferably be native species. Species to be planted in the boundary of project site should be un palatable for cattle's/ goats and should have proven capacity to add leaf-litter to soil and decompose. The species planted should be adaptable to


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the site conditions. Should be preferably pioneer species, deciduous in nature to allow maximum leaf-litter, have deep root system, fix atmospheric nitrogen and improve soil productivity. Species selected should have the ability to tolerate altered pH and toxicity of and site. They should be capable of meeting requirement of local people in regard to fuel fodder and should be able to attract bird, bees and butterflies. The species should be planted in mixed association.

4. For mining area reclamation plot culture experiments to be done to identify/ determine suitable species for the site.
5. Top soil with a mix of beneficial microbes (Bacteria/Fungi) to be used for reclamation of mine spoils. AM Fungi (Arbuscular mycorrhizal fungi), plant growth promoting Rhizobacteria and nitrogen fixing bacteria to be utilized.
6. Soil and moisture conservation and water harvesting structures to be used where ever possible for early amelioration and restoration of site.
7. Top soil is most important for successful rehabilitation of mined sites. Topsoil contains majority of seeds and plant propagation, soil microorganism, Organic matter and plant nutrients. Wherever possible the topsoil should be immediately used in the area of the for land form reconstruction, to pre mining conditions.
8. Over burdens may be analyzed and tested for soil characteristics and used in the site for revegetation. Wherever possible seeds, rhizome, bulbs, etc of pioneering species should be collected, preserved and used in restoring the site.
9. Native grasses seeds may be used as colonizers and soil binders, to prevent erosion and allow diverse self- sustaining plant communities to establish. Grasses may offer superior tolerance to drought, and climatic stresses.
10. Reclamation involves planned topographical reconstruction of site. Care to be taken to minimize erosion and runoff. Topsoils should have necessary physical, chemical, ecological, properties and therefore should be stored with precautions and utilized for reclamation process. Stocked topsoil should be stabilized using grasses to protect from wind. Seeds of various indigenous and local species may be broadcast after topsoil and treated overburden are spread.
11. Alkaline soils, acidic soils, Saline soils should be suitably treated/amended using green manure, mulches, farmyard manure to increase organic carbon. The efforts should be taken


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to landscape and use the land post mining. The EMP and mine closure plan should provide adequate budget for reestablishing the site to pre-mining conditions. Effective steps should be taken for utilization of over burden. Mine waste to be used for backfilling, reclamation, restoration, and rehabilitation of the terrain without affecting the drainage and water regimes. The rate of rehabilitation should be similar to rate of mining. The land disturbed should be reshaped for long term use. Mining should be as far as possible be ecofriendly. Integration of rehabilitation strategies with mining plan will enable speedy restoration.

12. Efforts should to taken to aesthetically improve the mine site. Generally, there are two approaches to restoration i.e Ecological approach which allows tolerant species to establish following succession process allowing pioneer species to establish. The other approach i.e plantation approach is with selected native species are planted. A blend of both methods may be resorted to restore the site by adding soil humas and mycorrhiza.
13. Action taken for restoration of the site should be specifically mentioned in the EC compliances.

Part-A: Conditions to be Complied before commencing mining operations:-

1. The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that
 - I. The project has been accorded Environmental Clearance.
 - II. Copies of clearance letters are available with the Tamil Nadu Pollution Control Board.
 - III. Environmental Clearance may also be seen on the website of the SEIAA.
 - IV. The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the SEIAA.
2. Mining activity should be reviewed by the District Collector after three years and decide for further extension.
3. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.


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4. The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.
5. **A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.**
6. Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.
7. The proponent shall ensure that First Aid Box is available at site.
8. The excavation activity shall not alter the natural drainage pattern of the area.
9. The excavated pit shall be restored by the project proponent for useful purposes.
10. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.
11. The quarrying operation shall be restricted between 7AM and 5 PM.
12. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.
13. A minimum distance of 50mts. from any civil structure shall be kept from the periphery of any excavation area.
14. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.
15. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.
16. Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.
17. Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.


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18. A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.
19. The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF& CC, GoI on 16.11.2009.
20. The following measures are to be implemented to reduce Air Pollution during transportation of mineral
- i. Roads shall be graded to mitigate the dust emission.
 - ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust
21. The following measures are to be implemented to reduce Noise Pollution
- i. Proper and regular maintenance of vehicles and other equipment
 - ii. Limiting time exposure of workers to excessive noise.
 - iii. The workers employed shall be provided with protection equipment and earmuffs etc.
 - iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.
 - v. All noise generating machinery the compressor, generator to be enclosed in acoustic enclosure so as to reduce noise in working area.
22. Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt: 11.01.2010 issued by the MoEF& CC, GoI to control noise to the prescribed levels.
23. Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Regional Director, CGWB. Suitable measures should be taken for rainwater harvesting.
24. Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.
25. Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.
26. The following measures are to be adopted to control erosion of dumps: -
- i. Retention/ toe walls shall be provided at the foot of the dumps.


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- ii. Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.
27. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous & other wastes (Management, and Trans Boundary Movement) Rules, 2016 and its amendments thereof to the recyclers authorized by TNPCB.
28. Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
29. Rain water harvesting to collect and utilize the entire water falling in land area should be provided.
30. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season.
31. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, if it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out. District Collector/mining officer shall ensure this.
32. No tree-felling shall be done in the leased area, except only with the permission from competent Authority.
33. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution.
34. It shall be ensured that the total extent of nearby quarries (existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 5 hectares within the mining lease period of this application.


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35. It shall be ensured that there is no habitation is located within 300 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 300m radius from the periphery of the quarry site.
36. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF& CC, GOI.
37. Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF& CC, GOI.
38. Bunds to be provided at the boundary of the project site.
39. The project proponent shall undertake plantation/afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.
40. Floor of excavated pit to be levelled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.
41. The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the CSR Activity
42. The Project Proponent shall provide solar lighting system to the nearby villages.
43. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
44. Safety equipments to be provided to all the employees.
45. Safety distance of 50m has to be provided in case of railway, reservoir, canal/odai
46. The Assistant/Deputy Director, Department of Geology & mining shall ensure that the proponent has engaged the blaster with valid Blasting license/certificate obtained from the competent authority before execution of mining lease.
47. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.
48. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of mining.
49. The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.


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50. The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent, etc., with respect to the existing activity before execution of mining.
51. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.
52. The Proponent shall ensure that the project activity including blasting, mining transportation etc should in no way have adverse impact to the other forests, such as reserve forests and social forests, tree plantation and bio diversity, surrounding water bodies etc.
53. The proponent shall provide Green Belt development at the rate of not less than 400 trees/Hectare. The tree saplings shall be not less than 3m height.
54. The fugitive emissions should be monitored during the mining activity and should be reported to TNPCB once in a month and the operation of the quarry should no way impact the agriculture activity & water bodies near the project site.
55. All the commitment made by the project proponent in the proposal shall be strictly followed.
56. The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
57. All required sanitary and hygienic measures should be in place before starting construction activities and they have to be maintained throughout the construction phase.
58. The company shall stress upon the preventive aspects of occupational health.
59. A separate environment and safety management cell with qualified staff shall be set up before commissioning of construction activities and shall be retained throughout the lifetime of the industry, for implementation of the stipulated environmental safeguards.
60. A scientific site/ ecological rehabilitation and restoration plan on long term basis should be drawn to carryout restoration with native species and Bio diversity.
61. The Green/Blue plan should guide the restoration of the site. The rehabilitation/restoration plan should be submitted to SEIAA-TN within one month. If applicable.
62. The existing water bodies should not be disturbed to ensure sustainable environment for aquatic life forms.
63. The proponent should completely implement all environmental pollution control measures as detailed in the EIA report and in the additional report.


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64. Avenue plantation wherever needed has to be carried out along the route for dust suppression.
65. The green belt developed for the prevention of dust pollution should not form a part of the larger green belt development envisaged in the EIA report.
66. Regular monitoring and check up for pulmonary and carcinogenic diseases to be carried out regularly, not only for the workers involved in the mines but also to the people in the villages adjoining the mines. Interaction with the Primary Health Centre & district medical officer should be on regular basis to monitor the incidence of the diseases if any and to provide suitable medical facility for the patients.
67. Monitoring of well water levels and water quality of the wells in the locations furnished in the EIA report shall be done during pre-monsoon and post monsoon period and results submitted to the Regional Office of MoEF, Chennai and SEIAA.
68. Monitoring of water quality and air quality in and around the project site in the selected monitoring points as mentioned in the EIA report shall be continued regularly involving Academic Institutions.
69. Hydro geological study including infiltration test shall be conducted by any reputed agency to estimate leachate quantity.
70. Regular medical check-up for mine workers and nearby residents around the project site involving community medical centre/NIMH shall be conducted.
71. As per norms, the health study should be conducted through competent/approved health organization and report submitted for one year.
72. The effective safe guard measures shall be provided to control particulate dust level in critical areas, transfer points and haul road within the mine area.
73. NOC from the State GWA for drawing ground water shall be obtained, if ground water table is intersected.
74. Green belt shall be provided as per norms of MoEF& CC, GOI, in consultation with local DFO.
75. All the recommendations made in the EIA report of the project shall be effectively implemented.
76. A booklet containing the Dos and Don'ts shall be prepared in vernacular languages for the use of the mine engineers/ managers and the workers to ensure that all necessary environmental, safety and health measures are undertaken.


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77. All the environmental protection measures and safeguards as recommended in the EIA report shall be complied with.
78. Hydro geological study of the area shall be reviewed annually and report submitted to the Authority. No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the operation of the Mining activity.
79. A separate Environmental Management Cell equipped with full fledged laboratory facilities to carry out the various Environmental Management and Monitoring functions shall be set up under the control of a Senior Executive.
80. The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF at Chennai, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; RSPM, SO₂, NO_x or critical sector parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

Part B: General Conditions:

1. EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
2. The Proponent shall obtain the Consent from the TNPC Board before commencing the activity.
3. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.
4. No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
5. Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
6. Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.


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7. A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
8. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
9. Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.
10. Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
11. All Personnel shall be provided with protective respiratory devices including safety shoes, masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
12. Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.
13. Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
14. The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.
15. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Chennai.
16. The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
17. This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would

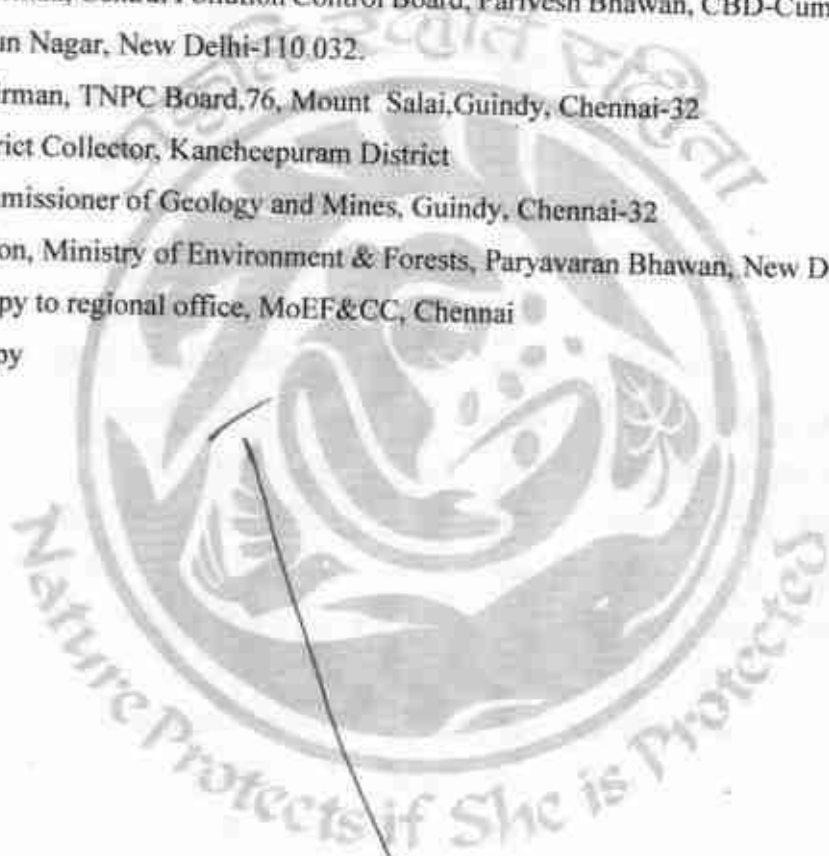

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- be considering the project on merits and be taking decisions independently of the Environmental Clearance
18. The SEIAA, Tamil Nadu may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.
 19. The SEIAA, Tamil Nadu may cancel the Environmental Clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this Environmental Clearance, if it is found or if it comes to the knowledge of this SEIAA, TN that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the Environmental Clearance.
 20. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
 21. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006, Wildlife Protection Act, 1972, Forest Conservation Act, 1980, Biodiversity Conservation Act, 2016, the Biological Diversity Act, 2002 and Biological diversity Rules, 2004 and Rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.
 22. Any other conditions stipulated by other Statutory/Government authorities shall be complied.
 23. Any appeal against this Environmental Clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
 24. The Environmental Clearance is issued based on the documents furnished by the project proponent. In case any documents found to be incorrect/not in order at a later date the Environmental Clearance issued to the project will be deemed to be revoked/ cancelled.


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Copy to:

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Additional Chief Secretary to Government, Environment and Forests Department, Tamil Nadu.
3. The Additional Chief Secretary to Government, Industries Department, Tamil Nadu.
4. The Additional Principal Chief Conservator of Forests, Regional Office (SZ), 34, HEPC Building, 1st& 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai - 34.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
6. The Chairman, TNPC Board, 76, Mount Salai, Guindy, Chennai-32
7. The District Collector, Kancheepuram District
8. The Commissioner of Geology and Mines, Guindy, Chennai-32
9. EI Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi Spare.
10. Mail copy to regional office, MoEF&CC, Chennai
11. File Copy



Signature Not Verified

Digitally signed by Thiru. Deepak S. Bilgi

Member Secretary

Date: 4/4/2023 2:52:23 PM

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THIRU. P. PONNIAH, I.A.S.,
CHAIRMAN/
DISTRICT COLLECTOR.



Kancheepuram District
Environment Impact
Assessment Authority,
Kancheepuram

ENVIRONMENTAL CLEARANCE

Lr.No.DEIAA-DIA/TN/MIN/335/Q3/2017-KPM, EC.No.3-2018, Dated: 11.01.18

To,
S. Murugesan,
S/o. Swaminathan,
No.1/52, Palaiyur,
Aalangudi Taluk,
Pudhukottai Dist.

Sir,

Sub: DEIAA - Proposed Roughstone / Gravel quarry -
S.F.Nos. 324/4A (0.20.50 Hect), 324/4B1 (0.07.00
Hect), 324/4B2 (0.02.00 Hect), 324/5 (0.27.50 Hect),
324/6 (0.08.00 Hect), 324/7A (0.52.00 Hect), 324/8B
(0.20.50 Hect), 324/10A (0.15.50 Hect), 324/10C
(0.47.00 Hect), 324/11 (0.49.50 Hect), 327/2 (0.45.50
Hect), 327/3A (0.16.00 Hect). over an extent of
3.11.00 hec. of Sirudhamur Village, Uthiramerur
Taluk - Kancheepuram District by Thiru. S. Murugesan
- Grant of Environmental Clearance - Reg.

Ref: 1 Your Application for Environment Clearance
DEIAA / TN / Kpm. Dist / 2017
Dated.04.12.2017.
2. Minutes of the DEAC meeting No.3, held on
DEAC meeting date 22.12.2017
3. Minutes of the DEIAA meeting held on DEIAA
meeting date 11.01.2018.

Details of Minor mineral Activity:-

This has reference to your application in the reference 1st cited. The proposal is for obtaining Environmental Clearance for minor minerals mining / quarrying projects falling under category 'B2' based on the particulars furnished in your application as shown below:


CHAIRMAN
DEIAA

1.	Name of Project Proponent and address	:	S. Murugesan, S/o. Swaminathan, No.1/52, Palaiyur, Aalangudi Taluk, Pudhukottai Dist.
2.	Location of the Proposed Activity	:	
	Survey Number	:	324/4A (0.20.50 Hect), 324/4B1 (0.07.00 Hect), 324/4B2 (0.02.00 Hect), 324/5 (0.27.50 Hect), 324/6 (0.08.00 Hect), 324/7A (0.52.00 Hect), 324/8B (0.20.50 Hect), 324/10A (0.15.50 Hect), 324/10C (0.47.00 Hect), 324/11 (0.49.50 Hect), 327/2 (0.45.50 Hect), 327/3A (0.16.00 Hect).
	Latitude and Longitude	:	12°43'27.89" N to 12°43'34.23" N 79°50'54.94" E to 79°51'08.09" E
	Village	:	Sirudhamur
	Taluk	:	Uthiramerur
	District	:	Kancheepuram
3.	Proposed Activity		
	i. Minor mineral	:	Roughstone / Gravel
	ii. Mining Lease Area	:	3.11.00 hecets.
	iii. Approved quantity	:	Roughstone = 3,36,900 M ³ Gravel = 45,466 M ³
	iv. Depth of quarrying	:	32 mtrs. below ground level
	v. Type of quarrying	:	Open cast semi-mechanized
	vi. Category (B1/B2)	:	"B2" category.
	vii. Precise Communication Area	:	District Collector, Kancheepuram Rc. No. 335 / Q3 / 2017 dated. 23.11.2017


CHAIRMAN
DEIAA

	viii.	Mining Plan approval	:	Assistant Director, Geology and Mining, letter Rc.No. 335 / Q3 / 2017 dated. 01.12.2017
	ix.	Quarrying lease period	:	5 Years
4.		Whether Project area attracts any general conditions specified in the EIA notification, 2006 as amended:-	:	
5.		Man Power requirement per day	:	13 Nos.
6.		Utilities		
	i.	Source of Water	:	Water vendors / Existing borehole
	ii.	Quantity of Water Requirement in KLD:		
		a. Domestic	:	0.6 KLD
		b. Industrial	:	-
		c. Green Belt & Dust Suppression	:	0.4 KLD
	iii.	Power requirement		
		a. Domestic purpose	:	Petroleum Fuel is to be used for operating machineries and vehicles during quarrying process. Electricity will be used only for mine lighting and office purposes.
		b. Industrial purpose	:	
7.		Cost		
	i.	Project Cost	:	Rs.86,75,000/-
	ii.	EMP Cost	:	Rs.7,30,000/-
8.		Public Consultation:-	:	Not required as per O.M. dated 24.12.2013 of MoEF, GOI
9.		Date of Appraisal by DEAC:	:	22.12.2017 3 rd Meeting


CHAIRMAN
DEIAA

<p>10. Date of review / discussion by DEIAA and the Remarks:-</p> <p>The proposal was placed before the DEIAA in its DEIAA meeting No.3 held on 11.01.2018 and the Authority after careful consideration, decided to grant Environmental Clearance to the said project for Mining of "Rough stone and Gravel" subject to the terms and conditions stipulated under the provisions of Environment Impact Assessment Notification, 2006 as amended.</p>
<p>11. Validity:</p> <p>This Environmental Clearance is granted for Mining of "Rough stone and Gravel" for the proposed quantum of 3,36,900 M³ Roughstone & 45,466 M³ Gravel a period of "Five years" from the date of execution of Lease Deed.</p>

Conditions to be Complied before commencing mining operations:-

1. The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that
 - I. The project has been accorded Environmental Clearance.
 - II. Copies of clearance letters are available with the Tamil Nadu Pollution Control Board.
 - III. Environmental Clearance may also be seen on the website of the DEIAA.
 - IV. The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the DEIAA.
2. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.
3. The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.
4. A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.


 CHAIRMAN
 DEIAA

- 5
5. Quarry lease area should be demarcated on the ground with barbed wire fencing on all sides depicting the boundary of the lease area. All the boundary pillars shall be erected and red flagged before commencement of quarrying.
 6. The proponent shall ensure that First Aid Box is available at site.
 7. The excavation activity shall not alter the natural drainage pattern of the area.
 8. The excavated pit shall be restored by the project proponent for useful purposes.
 9. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.
 10. The quarrying operation shall be restricted between 7AM and 5 PM.
 11. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.
 12. A minimum distance of 15 mts. from any civil structure shall be kept from the periphery of any excavation area.
 13. Depth of quarrying shall be 2m above the ground water table /approved depth of mining whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.
 14. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.
 15. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.
 16. Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.


CHAIRMAN
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25. Permission from the competent authority should be obtained for drawing of ground water, if any, required for this project.
26. Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.
27. The following measures are to be adopted to control erosion of dumps:-
 - i. Retention/ toe walls shall be provided at the foot of the dumps.
 - ii. Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.
28. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by TNPCB.
29. Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
30. Rain water harvesting to collect and utilize the entire water falling in land area should be provided.
31. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season.
32. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, if it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out. District Collector/mining officer shall ensure this.


 CHAIRMAN
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33. No tree-felling shall be done in the leased area, except only with the permission from competent Authority.
34. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution.
35. It shall be ensured that the total extent of nearby quarries(existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25 hectares within the mining lease period of this application.
36. It shall be ensured that there is no habitation is located within 300 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site.
37. Ground water quality monitoring should be conducted once in 3 Months.
38. Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.
39. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF , GOI.
40. Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF , GOI..
41. The project proponent shall undertake plantation/afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place and progress report shall be submitted once in 3 months.
42. At least 10 Neem trees should be planted around the boundary of the quarry site.
43. Floor of excavated pit to be levelled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.


CHAIRMAN
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44. The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the CSR Activity.
45. The Project Proponent shall provide solar lighting system to the nearby villages.
46. The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.
47. Rainwater shall be pumped out Via Settling Tank only.
48. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
49. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.
50. Safety equipments to be provided to all the employees.
51. Safety distance of 50m has to be provided in case of railway, reservoir, canal/odal.
52. The Deputy Superintendent of Police, Revenue Divisional Officer, and the Tahsildar concerned shall ensure that the proponent has engaged the blaster with valid Blasting license/certificate obtained from the competent authority before execution of mining lease.
53. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.
54. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of mining.
55. The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.


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56. The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent, etc., with respect to the existing activity before execution of mining.
57. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.
58. Blasting shall be carried out after announcing to the public through adequate public address system to avoid any accident.
59. Proper sanitation measures, first aid kit and protected drinking water should be provided to the labourers.+
60. The Environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Kancheepuram.
61. Periodical medical examination of the quarry workers should be carried out by a registered medical practitioner and the report should be filed in the quarry office in a separate file and copy should be sent to the Deputy Director, Health Services, Kancheepuram.

General Conditions:

- 1) EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
- 2) The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.
- 3) No change in mining technology and scope of working should be made without prior approval of the DEIAA, Kancheepuram District, Tamil Nadu.
- 4) No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
- 5) Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.


CHAIRMAN
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CHAIRMAN
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- 6) Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
- 7) A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
- 8) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- 9) Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.
- 10) Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
- 11) All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- 12) Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
- 13) The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.
- 14) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Chennai.
- 15) The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.


 CHAIRMAN
 DEIAA

- 16) This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance.
- 17) The DEIAA, Kancheepuram District may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.
- 18) The DEIAA, Kancheepuram District may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this DEIAA, Kancheepuram District that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.
- 19) Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
- 20) The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.
- 21) Any other conditions stipulated by other Statutory/Government authorities shall be complied.
- 22) Any appeal against this environmental clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
- 23) The District Forest Officer had put forth the below mentioned conditions for strict compliance.


CHAIRMAN
DEIAA

1. The Project areas shall not abut Reserve Forest Boundaries at any cost incase of Reserve Forest abutting to project areas, 60M safety distance shall be left and maintained.
2. The quarry vehicles shall not use forest land as pathway
3. Incase of Breach of conditions, the quarry operations should be suspended immediately.

24) The Expert Member Thiru. Sabanayagam had emphasised that quarry operations should not cross beyond the ground water table.


CHAIRMAN
DEIAA

Copy to:-

1. The Secretary, Ministry of Mines, Government of India , Shastri Bhawan, New Delhi.
2. The Principal Secretary, Environment and Forest Department, Government of Tamil Nadu, Tamil Nadu.
3. The Principal Secretary to Government, Industries Department, Government of Tamil Nadu, Tamil Nadu.
4. The Additional Principal Chief Conservator of Forests, Regional Office (SZ), 34, HEPC Building 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai-34.
5. The Chairman, Tamil Nadu Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex East Arjun Nagar, New Delhi 110 032.
6. The Chairman Tamil Nadu Pollution Control Board, 76 Mount Salai Guindy, Chennai-32.
7. The Chairman, SEIAA, Panagal Building, Chennai.
8. The Commissioner of Geology and Mining, Guindy, Chennai-32
9. E1 Division, Ministry of Environment and Forests Paryavaran Bhawan, New Delhi.
10. Spare.



CHENNAI METTEX LAB PRIVATE LIMITED[®]

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Email : test@mettexlab.com | Web : www.mettexlab.com

TEST REPORT

ISSUED TO: Tvl. Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7, Sirumailour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18273

Test Certificate Date : 06.06.2023

Sample Description : Ambient Air Monitoring

Location of Sampling : AAQ1 Core Zone - 12°43'8" 90°N 79°50'29" 77"E

Sampling Plan & Procedure: IS 5182 Part 14:2000 & CML/LAB/ENV/SOP/07

Sampling Instrument ID & Calibration Due Date: CML/ENV/RDS/26 & 29.11.2023

Sampling Instrument ID & Calibration Due Date: CML/ENV/FDS/27 & 29.11.2023

Ambient Air Monitoring Details		Particulate Pollutant			Gaseous Pollutant					Metals Pollutant			Organic Pollutant	
Parameters		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	NH ₃	O ₃	CO	Pb	Ni	As	Cd	BaP
NAAQ Norms		200	60	100	80	80	400	180	4	1	20	6	5	1
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³
Date	Period (hrs)	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
03.03.2023	7:00-7:00	67.6	22.6	45.6	8.2	26.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
04.03.2023	7:15-7:15	66.7	22.1	46.7	8.9	24.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10.03.2023	7:00-7:00	66.9	23.6	47.1	9.6	23.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11.03.2023	7:15-7:15	66.5	23.9	44.2	8.7	22.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17.03.2023	7:00-7:00	65.8	22.3	44.6	8.3	21.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18.03.2023	7:15-7:15	65.4	22.4	45.7	7.4	23.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24.03.2023	7:00-7:00	65.8	23.2	43.9	7.1	25.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25.03.2023	7:15-7:15	65.1	23.1	43.3	9.5	24.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
31.03.2023	7:00-7:00	65.3	23.3	46.1	8.3	20.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
01.04.2023	7:15-7:15	65.7	22.8	44.0	8.8	23.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
07.04.2023	7:00-7:00	68.4	23.6	43.5	7.0	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
08.04.2023	7:15-7:15	68.2	23.3	42.3	7.2	21.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14.04.2023	7:00-7:00	68.5	24.1	45.8	9.7	24.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15.04.2023	7:15-7:15	68.9	24.3	45.6	9.5	23.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.04.2023	7:00-7:00	66.7	22.8	44.0	8.9	21.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22.04.2023	7:15-7:15	65.5	24.7	46.7	8.1	22.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28.04.2023	7:00-7:00	65.9	23.9	46.6	9.9	23.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29.04.2023	7:15-7:15	65.7	23.1	43.3	7.6	22.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
05.05.2023	7:00-7:00	68.8	22.9	42.1	7.1	23.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06.05.2023	7:15-7:15	66.9	22.8	43.8	9.8	20.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12.05.2023	7:00-7:00	66.4	21.3	47.5	9.2	21.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13.05.2023	7:15-7:15	69.1	21.1	48.9	9.8	20.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
19.05.2023	7:00-7:00	69.7	22.9	43.4	7.1	21.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20.05.2023	7:15-7:15	65.3	22.3	43.9	7.6	23.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26.05.2023	7:00-7:00	65.5	22.7	45.3	7.7	22.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27.05.2023	7:15-7:15	66.1	23.1	44.1	7.9	21.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: BDL - Below Detection Limit ; DL - Detection Limit ; NH₃ BDL (DL:20); O₃ BDL (DL:20); CO BDL (DL:1.0); Pb BDL (DL:0.1); Ni BDL (DL:1.0); As BDL (DL:1.0); Cd BDL (DL:1.0); BaP BDL (DL:0.1)
Remarks: The values observed for the pollutants given above are within the CPCB standards.



For Chennai Mettex Lab Private Limited

Reviewed & Authorized By
P. KAVITHA

NOTE: Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and liable for legal action. Unless otherwise stated the attributed results in this test report refer only to the sample(s) tested and each sample(s) are retained for 15 days from the date of testing, except in case of regulatory samples, which will be retained for a specific period as per statutory requirement. While permissible & environmental testing related samples will be discarded immediately upon completion of testing. Samples are not drawn by us unless otherwise stated. This document cannot be reproduced except in full, without prior written approval of the laboratory. This report is for the exclusive use of Chennai Mettex Lab's customer, and is provided in accordance with the agreement between Chennai Mettex Lab and its Customer.



CHENNAI METTEX LAB PRIVATE LIMITED

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Email : test@mettexlab.com | Web : www.mettexlab.com

TEST REPORT

ISSUED TO: Tvl. Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B, 15/14, 15/15A, 15/15B, 15/18, 18/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7, Sirumalour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18274

Test Certificate Date : 06.06.2023

Sample Description : Ambient Air Monitoring

Location of Sampling : AAQ 2 - Madhur - 12°43'16.85"N 79°50'14.16"E

Sampling Plan & Procedure: IS 5182 Part 14:2000 & CML/LAB/ENV/SOP/07

Sampling Instrument ID & Calibration Due Date: CML/ENV/RDS/28 & 29.11.2023

Sampling Instrument ID & Calibration Due Date: CML/ENV/FDS/29 & 29.11.2023

Ambient Air Monitoring Details		Particulate Pollutant			Gaseous Pollutant					Metals Pollutant			Organic Pollutant	
Parameters		SPM	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	O ₃	CO	Pb	Ni	As	C ₆ H ₆	BaP
NAAQ Norms		200	60	100	80	80	400	180	4	1	20	6	5	1
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³
Date	Period:hrs	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
03.03.2023	7:00-7:00	68.5	23.2	46.2	7.8	20.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
04.03.2023	7:15-7:15	68.1	22.6	45.1	7.3	20.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10.03.2023	7:00-7:00	68.1	24.9	46.9	7.5	22.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11.03.2023	7:15-7:15	68.9	21.1	44.6	6.3	21.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17.03.2023	7:00-7:00	67.2	21.5	45.3	6.1	20.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18.03.2023	7:15-7:15	67.4	20.1	44.7	7.9	21.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24.03.2023	7:00-7:00	67.3	22.0	45.5	7.2	22.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25.03.2023	7:15-7:15	67.1	23.6	46.1	6.3	20.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
31.03.2023	7:00-7:00	67.8	21.9	46.5	6.4	20.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
01.04.2023	7:15-7:15	67.2	22.1	44.3	7.6	21.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
07.04.2023	7:00-7:00	66.5	23.6	45.7	7.9	20.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
08.04.2023	7:15-7:15	66.9	20.4	46.0	7.5	21.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14.04.2023	7:00-7:00	67.9	23.7	47.4	8.9	20.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15.04.2023	7:15-7:15	67.5	24.5	46.5	8.2	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.04.2023	7:00-7:00	68.2	22.5	45.6	8.8	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22.04.2023	7:15-7:15	68.9	23.1	45.4	7.9	22.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28.04.2023	7:00-7:00	67.5	24.3	47.2	7.0	21.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29.04.2023	7:15-7:15	68.9	24.5	46.0	6.5	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
05.05.2023	7:00-7:00	69.4	23.3	46.8	6.9	22.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06.05.2023	7:15-7:15	68.2	23.5	46.1	8.5	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12.05.2023	7:00-7:00	67.9	22.7	44.9	8.1	20.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13.05.2023	7:15-7:15	68.6	23.6	48.4	7.9	21.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
19.05.2023	7:00-7:00	68.9	22.1	46.5	7.5	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20.05.2023	7:15-7:15	68.1	23.3	45.2	7.1	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26.05.2023	7:00-7:00	68.5	23.6	45.9	7.3	23.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27.05.2023	7:15-7:15	67.8	23.9	44.3	7.2	21.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: BDL: Below Detection Limit; DL: Detection Limit; NH₃: BDL (DL:20); O₃: BDL (DL:20); CO: BDL (DL:1.0);

Pb: BDL (DL:0.1); Ni: BDL (DL:1.0); As: BDL (DL:1.0); C₆H₆: BDL (DL:1.0); BaP: BDL (DL:0.1)

Remarks: The values observed for the pollutants given above are within the CPCB standards

End of Report



For Chennai Mettex Lab Private Limited

[Signature]

Reviewed & Authorized By

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CHENNAI METTEX LAB PRIVATE LIMITED

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Phone : +91 44 22323163, 22311034, 42179490, 42179491 | CIN : U74999TN2008PTCO69459
Email : test@mettexlab.com | Web : www.mettexlab.com

TEST REPORT

ISSUED TO: Tvl. Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7.
Sirumailour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18275

Test Certificate Date : 06.06.2023

Sample Description : Ambient Air Monitoring

Location of Sampling : AAQ3 - Pullampakkam - 12°45'13 36"N 79°50'26 53"E

Sampling Plan & Procedure: IS 5182 Part 14 2000 & CML/LAB/ENV/SOP/07

Sampling Instrument ID & Calibration Due Date: CML/ENV/RDS/30 & 29.11.2023

Sampling Instrument ID & Calibration Due Date: CML/ENV/FDS/31 & 29.11.2023

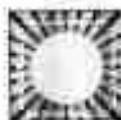
Ambient Air Monitoring Details		Particulate Pollutant			Gaseous Pollutant					Metals Pollutant			Organic Pollutant	
Parameters		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	NH ₃	O ₃	CO	Pb	Ni	As	C ₆ H ₆	BaP
NAAQ Norms		200	60	100	80	80	400	180	4	1	20	6	5	1
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³
Date	Period, hrs	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
03.03.2023	7:00-7:00	60.2	20.6	44.5	5.2	18.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
04.03.2023	7:15-7:15	60.8	21.2	43.1	5.3	19.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10.03.2023	7:00-7:00	61.5	22.5	42.9	6.9	17.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11.03.2023	7:15-7:15	61.9	21.5	42.5	7.5	18.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17.03.2023	7:00-7:00	61.7	22.8	42.1	6.1	18.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18.03.2023	7:15-7:15	62.9	22.1	44.6	6.9	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24.03.2023	7:00-7:00	62.5	23.1	43.1	7.3	21.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25.03.2023	7:15-7:15	61.3	22.5	42.8	7.1	18.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
31.03.2023	7:00-7:00	61.7	22.0	44.6	5.8	19.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
01.04.2023	7:15-7:15	64.2	22.5	44.5	5.8	19.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
07.04.2023	7:00-7:00	60.6	21.8	43.1	7.2	20.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
08.04.2023	7:15-7:15	60.9	22.1	45.5	7.9	19.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14.04.2023	7:00-7:00	61.4	22.6	45.2	7.5	18.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15.04.2023	7:15-7:15	61.8	23.7	43.6	7.1	18.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.04.2023	7:00-7:00	61.3	22.4	43.1	6.9	19.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22.04.2023	7:15-7:15	62.5	21.4	43.5	6.5	18.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28.04.2023	7:00-7:00	63.5	22.8	42.1	7.2	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29.04.2023	7:15-7:15	63.7	22.4	43.9	6.8	18.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
05.05.2023	7:00-7:00	64.5	23.1	43.5	5.3	18.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06.05.2023	7:15-7:15	62.2	22.8	43.9	5.1	19.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12.05.2023	7:00-7:00	62.8	22.4	42.8	5.5	19.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13.05.2023	7:15-7:15	64.5	21.9	44.5	7.2	19.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
19.05.2023	7:00-7:00	65.3	21.1	42.2	6.9	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20.05.2023	7:15-7:15	63.5	22.5	43.9	7.2	21.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26.05.2023	7:00-7:00	65.5	21.9	43.3	6.4	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27.05.2023	7:15-7:15	65.9	21.4	42.1	7.6	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: BDL: Below Detection Limit; DL: Detection Limit; NH₃: BDL (DL:20); O₃: BDL (DL:20); CO: BDL (DL:1.0); Pb: BDL (DL:0.1); Ni: BDL (DL:1.0); As: BDL (DL:1.0); C₆H₆: BDL (DL:1.0); BaP: BDL (DL:0.1)

Remarks: The values observed for the pollutants given above are within the CPCB standards.

End of Report

For Chennai Mettex Lab Private Limited



[Signature]
Reviewed & Authorized By
P. KAVITHA

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Email : test@mettexlab.com | Web : www.mettexlab.com

TEST REPORT

ISSUED TO: Tvl. Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7, Sirumailour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18276

Test Certificate Date : 06.06.2023

Sample Description : Ambient Air Monitoring

Location of Sampling : AAQ4 - Anambakkam - 12° 42' 8.86" N 79° 50' 40.23" E

Sampling Plan & Procedure: IS 5182 Part 14:2000 & CML/LAB/ENV/SOP/07

Sampling Instrument ID & Calibration Due Date: CML/ENV/RDS/32 & 29.11.2023

Sampling Instrument ID & Calibration Due Date: CML/ENV/FDS/33 & 29.11.2023

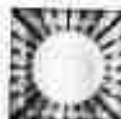
Ambient Air Monitoring Details		Particulate Pollutant			Gaseous Pollutant					Metals Pollutant			Organic Pollutant	
Parameters		SPM	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	O ₃	CO	Pb	Ni	As	C ₆ H ₆	BaP
NAAQ Norms		200	60	100	80	80	400	180	4	1	20	6	5	1
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³
Date	Period, hrs	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
03.03.2023	7:00-7:00	62.4	22.5	41.6	6.3	19.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
04.03.2023	7:15-7:15	62.7	23.9	41.2	6.4	19.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10.03.2023	7:00-7:00	62.3	21.8	42.5	6.2	18.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11.03.2023	7:15-7:15	62.8	22.3	42.9	6.9	20.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17.03.2023	7:00-7:00	62.9	20.5	43.6	6.2	19.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18.03.2023	7:15-7:15	63.2	22.6	46.9	6.1	18.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24.03.2023	7:00-7:00	63.7	21.5	44.3	6.8	18.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25.03.2023	7:15-7:15	63.9	22.9	44.6	6.5	18.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
31.03.2023	7:00-7:00	64.8	23.3	41.3	6.2	19.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
01.04.2023	7:15-7:15	62.8	18.6	44.0	6.8	20.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
07.04.2023	7:00-7:00	62.9	19.9	40.6	6.9	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
08.04.2023	7:15-7:15	64.5	19.6	41.1	6.4	21.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14.04.2023	7:00-7:00	64.8	18.8	42.6	6.8	22.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15.04.2023	7:15-7:15	62.8	20.5	41.1	6.3	19.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.04.2023	7:00-7:00	61.4	20.9	42.8	6.9	19.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22.04.2023	7:15-7:15	62.3	19.6	42.9	6.4	20.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28.04.2023	7:00-7:00	62.9	19.5	41.6	6.2	21.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29.04.2023	7:15-7:15	63.7	19.0	42.8	5.9	22.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
05.05.2023	7:00-7:00	63.8	19.1	40.3	5.8	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06.05.2023	7:15-7:15	64.5	19.7	43.8	6.1	22.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12.05.2023	7:00-7:00	65.5	19.3	42.9	6.8	20.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13.05.2023	7:15-7:15	65.1	21.1	41.2	6.2	21.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
19.05.2023	7:00-7:00	61.2	21.5	41.3	6.5	20.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20.05.2023	7:15-7:15	61.9	21.9	43.9	6.6	21.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26.05.2023	7:00-7:00	62.7	20.3	42.7	6.5	20.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27.05.2023	7:15-7:15	62.9	20.9	42.1	6.7	22.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: BDL: Below Detection Limit, DL: Detection Limit, NH₃: BDL (DL:20), O₃: BDL (DL:20), CO: BDL (DL:1.0), Pb: BDL (DL:0.1), Ni: BDL (DL:1.0), As: BDL (DL:1.0), C₆H₆: BDL (DL:1.0), BaP: BDL (DL:0.1)

Remarks: The values observed for the pollutants given above are within the CPCB standards.

End of Report

For Chennai Mettex Lab Private Limited



[Signature]
Reviewed & Authorized By
P. KAVITHA
Technical Manager

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TEST REPORT

ISSUED TO: Tvi. Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A,
15/13B, 15/14, 15/15A, 15/15B, 15/18, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7,
Sirumailour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18277

Test Certificate Date : 06.06.2023

Sample Description : Ambient Air Monitoring

Location of Sampling : AAQ5 - Nariambakkam - 12°42'0.40"N 79°48'29.43"E

Sampling Plan & Procedure: IS 5182 Part 14:2000 & CML/LAB/ENV/SQP/07

Sampling Instrument ID & Calibration Due Date: CML/ENV/RDS/34 & 29.11.2023

Sampling Instrument ID & Calibration Due Date: CML/ENV/FDS/35 & 29.11.2023

Ambient Air Monitoring Details		Particulate Pollutant			Gaseous Pollutant					Metals Pollutant			Organic Pollutant	
Parameters		SPM	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	O ₃	CO	Pb	Ni	As	C ₆ H ₆	BaP
NAAQ Norms		200	60	100	80	80	400	180	4	1	20	6	5	1
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³
Date	Period, hrs	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
03.03.2023	7:00-7:00	63.5	19.2	43.4	6.5	19.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
04.03.2023	7:15-7:15	63.7	18.6	42.9	6.0	19.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10.03.2023	7:00-7:00	63.8	19.5	43.1	5.8	18.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11.03.2023	7:15-7:15	64.5	18.9	43.8	6.2	20.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17.03.2023	7:00-7:00	64.9	19.5	44.2	5.9	18.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18.03.2023	7:15-7:15	64.5	19.9	43.1	6.6	18.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24.03.2023	7:00-7:00	65.2	18.9	42.8	6.8	18.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25.03.2023	7:15-7:15	64.7	19.3	42.1	5.6	20.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
31.03.2023	7:00-7:00	63.7	19.2	43.6	6.3	21.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
01.04.2023	7:15-7:15	63.9	19.5	42.5	6.6	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
07.04.2023	7:00-7:00	65.2	18.6	42.9	7.3	21.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
08.04.2023	7:15-7:15	65.5	17.3	43.1	6.9	20.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14.04.2023	7:00-7:00	63.2	19.5	43.8	6.2	21.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15.04.2023	7:15-7:15	63.4	18.1	42.4	6.5	20.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.04.2023	7:00-7:00	65.8	19.5	42.5	6.1	19.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22.04.2023	7:15-7:15	65.8	18.8	43.9	5.9	19.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28.04.2023	7:00-7:00	64.2	19.6	43.1	6.3	18.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29.04.2023	7:15-7:15	64.8	18.1	42.6	6.0	18.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
05.05.2023	7:00-7:00	64.9	18.9	42.4	6.5	19.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06.05.2023	7:15-7:15	66.2	19.1	43.2	7.4	18.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12.05.2023	7:00-7:00	64.1	19.6	44.5	6.5	18.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13.05.2023	7:15-7:15	62.7	18.2	44.9	5.9	17.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
19.05.2023	7:00-7:00	65.3	19.9	43.2	6.2	18.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20.05.2023	7:15-7:15	64.2	19.1	43.7	6.4	18.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26.05.2023	7:00-7:00	64.8	18.6	42.1	6.5	18.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27.05.2023	7:15-7:15	64.7	18.4	42.5	6.7	18.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: BDL: Below Detection Limit ; DL: Detection Limit ; NH₃: BDL (DL:20); O₃: BDL (DL:20); CO: BDL (DL:1.0);
Pb: BDL (DL:0.1); Ni: BDL (DL:1.0); As: BDL (DL:1.0); C₆H₆: BDL (DL:1.0); BaP: BDL (DL:0.1)
Remarks: The values observed for the pollutants given above are within the CPCB standards.

End of Report

For Chennai Mettex Lab Private Limited



Reviewed & Authorized By

P. KAVITHA

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CHENNAI METTEX LAB PRIVATE LIMITED

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Email : test@mettexlab.com | Web : www.mettexlab.com

TEST REPORT

ISSUED TO: Tvl. Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A,
15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7,
Sirumallour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18278

Test Certificate Date : 06.06.2023

Sample Description : Ambient Air Monitoring

Location of Sampling : AAQ 6 - Kavanipakkam - 12°43'17 14"N 79°53'36 68"E

Sampling Plan & Procedure: IS 5182 Part 14:2000 & CML/LAB/ENV/SOP/07

Sampling Instrument ID & Calibration Due Date: CML/ENV/RDS/36 & 29.11.2023

Sampling Instrument ID & Calibration Due Date: CML/ENV/FDS/37 & 29.11.2023

Ambient Air Monitoring Details		Particulate Pollutant			Gaseous Pollutant					Metals Pollutant			Organic Pollutant	
Parameters		SPM	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	O ₃	CO	Pb	Ni	As	C ₆ H ₆	BaP
NAAQ Norms		200	60	300	80	80	400	180	4	1	20	6	5	1
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³
Date	Period:hrs	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
03.03.2023	7:00-7:00	65.5	22.1	41.5	7.8	19.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
04.03.2023	7:15-7:15	65.7	22.6	41.9	7.5	19.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10.03.2023	7:00-7:00	65.2	23.1	42.6	7.1	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11.03.2023	7:15-7:15	65.8	22.4	42.2	7.2	19.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17.03.2023	7:00-7:00	66.3	21.8	41.6	7.8	19.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18.03.2023	7:15-7:15	64.2	22.1	42.1	7.6	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24.03.2023	7:00-7:00	65.8	21.6	41.9	7.2	21.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25.03.2023	7:15-7:15	68.2	20.1	40.1	7.8	20.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
31.03.2023	7:00-7:00	67.2	19.8	40.6	7.3	19.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
01.04.2023	7:15-7:15	67.9	19.1	41.0	7.9	18.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
07.04.2023	7:00-7:00	68.4	21.2	42.8	8.2	18.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
08.04.2023	7:15-7:15	65.3	18.9	40.5	8.4	18.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14.04.2023	7:00-7:00	65.1	18.6	40.3	8.6	18.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15.04.2023	7:15-7:15	64.5	19.8	42.6	8.2	18.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.04.2023	7:00-7:00	63.5	20.3	43.5	7.6	19.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22.04.2023	7:15-7:15	64.8	21.5	42.6	7.9	19.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28.04.2023	7:00-7:00	64.6	22.3	43.4	7.2	18.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29.04.2023	7:15-7:15	67.5	22.8	42.8	7.1	18.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
05.05.2023	7:00-7:00	67.9	23.1	43.3	7.9	19.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06.05.2023	7:15-7:15	67.5	22.7	42.9	7.5	19.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12.05.2023	7:00-7:00	67.2	23.6	43.5	8.2	18.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13.05.2023	7:15-7:15	68.5	23.1	43.9	8.8	18.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
19.05.2023	7:00-7:00	68.9	22.7	42.6	7.6	18.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20.05.2023	7:15-7:15	67.1	22.5	42.1	7.5	18.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26.05.2023	7:00-7:00	67.3	22.9	42.5	7.8	18.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27.05.2023	7:15-7:15	67.4	22.4	43.1	7.3	18.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: BDL: Below Detection Limit, DL: Detection Limit; NH₃: BDL (DL:20); O₃: BDL (DL:20); CO: BDL (DL:1.0);
Pb: BDL (DL:0.1); Ni: BDL (DL:1.0); As: BDL (DL:1.0); C₆H₆: BDL (DL:1.0); BaP: BDL (DL:0.1)

Remarks: The values observed for the pollutants given above are within the CPCB standards.

End of Report

For Chennai Mettex Lab Private Limited



[Signature]
Reviewed & Authorized By
P. KAVITHA

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Email : test@mettexlab.com | Web : www.mettexlab.com

TEST REPORT

ISSUED TO: Tvi, Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A,
15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7,
Sirumailour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18279

Test Certificate Date : 06.06.2023

Sample Description : Ambient Air Monitoring

Location of Sampling : AAQ7 - Vayalakovur - 12°44'4.86"N 79°49'19.88"E

Sampling Plan & Procedure: IS 5182 Part 14:2000 & CML/LAB/ENV/SOP/07

Sampling Instrument ID & Calibration Due Date: CML/ENV/RDS/38 & 29.11.2023

Sampling Instrument ID & Calibration Due Date: CML/ENV/FDS/39 & 29.11.2023

Ambient Air Monitoring Details		Particulate Pollutant			Gaseous Pollutant					Metals Pollutant			Organic Pollutant	
Parameters		SPM	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	NH ₃	O ₃	CO	Pb	Ni	As	C ₆ H ₆	BaP
NAAQ Norms		200	60	100	80	80	400	180	4	1	20	6	5	1
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³
Date	Period:Hrs	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
03.03.2023	7:00-7:00	64.1	25.3	43.6	8.3	20.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
04.03.2023	7:15-7:15	64.8	24.2	44.5	8.2	21.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10.03.2023	7:00-7:00	64.2	25.3	43.9	8.4	22.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11.03.2023	7:15-7:15	64.7	24.6	44.7	8.2	20.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17.03.2023	7:00-7:00	63.2	24.1	43.5	8.3	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18.03.2023	7:15-7:15	63.8	23.5	44.1	8.8	21.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24.03.2023	7:00-7:00	63.4	25.1	44.9	8.9	20.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25.03.2023	7:15-7:15	63.8	24.6	43.1	9.1	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
31.03.2023	7:00-7:00	63.1	23.6	44.8	9.5	22.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
01.04.2023	7:15-7:15	64.8	24.1	45.1	9.4	22.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
07.04.2023	7:00-7:00	64.2	23.5	43.0	9.7	20.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
08.04.2023	7:15-7:15	65.5	21.2	43.5	9.2	22.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14.04.2023	7:00-7:00	65.8	21.9	44.9	9.3	21.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15.04.2023	7:15-7:15	63.2	23.6	43.1	9.4	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.04.2023	7:00-7:00	63.9	23.2	44.2	8.2	22.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22.04.2023	7:15-7:15	63.7	24.5	43.7	8.1	22.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28.04.2023	7:00-7:00	64.1	25.1	44.6	7.6	20.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29.04.2023	7:15-7:15	64.8	23.0	43.1	7.4	22.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
05.05.2023	7:00-7:00	64.2	24.8	43.8	7.2	20.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06.05.2023	7:15-7:15	64.1	23.8	44.5	7.7	21.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12.05.2023	7:00-7:00	65.2	23.4	43.0	7.5	21.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13.05.2023	7:15-7:15	65.9	24.7	45.1	8.2	20.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
19.05.2023	7:00-7:00	65.7	23.9	44.9	8.1	20.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20.05.2023	7:15-7:15	64.2	24.1	44.2	8.6	21.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26.05.2023	7:00-7:00	64.4	24.6	44.1	8.7	20.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27.05.2023	7:15-7:15	64.7	24.8	44.5	8.4	20.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: BDL: Below Detection Limit; DL: Detection Limit; NH₃: BDL (DL:20); O₃: BDL (DL:20); CO: BDL (DL:1.0); Pb: BDL (DL:0.1); Ni: BDL (DL:1.0); As: BDL (DL:1.0); C₆H₆: BDL (DL:1.0); BaP: BDL (DL:0.1)

Remarks: The values observed for the pollutants given above are within the CPCB standards.

End of Report

For Chennai Mettex Lab Private Limited



[Signature]
Reviewed & Authorized By

P. KAVITHA

Technical Manager

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TEST REPORT

ISSUED TO: Tvi, Murugappa Blue Metals.

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A,
15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7,
Sirumailour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18280

Test Certificate Date : 06.06.2023

Sample Description : Ambient Air Monitoring

Location of Sampling : AAQ8 - Sirumailur- 12°44'17.07"N 79°52'4.28"E

Sampling Plan & Procedure: IS 5182 Part 14:2000 & CML/LAB/ENV/SOP/07

Sampling Instrument ID & Calibration Due Date: CML/ENV/RDS/40 & 29.11.2023

Sampling Instrument ID & Calibration Due Date: CML/ENV/FDS/41 & 29.11.2023

Ambient Air Monitoring Details		Particulate Pollutant			Gaseous Pollutant					Metals Pollutant			Organic Pollutant	
Parameters		SPM	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	NH ₃	O ₃	CO	Pb	Ni	As	C ₆ H ₆	BaP
NAAQ Norms:		200	100	60	80	80	400	180	4	1	20	6	5	1
Unit		µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	ng/m ³	ng/m ³	µg/m ³	ng/m ³
Date	Period hrs	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
03.03.2023	7:00-7:00	60.1	22.5	40.7	6.3	20.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
04.03.2023	7:15-7:15	60.4	23.3	40.1	5.6	19.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
10.03.2023	7:00-7:00	60.2	22.7	41.6	5.9	19.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11.03.2023	7:15-7:15	60.3	25.8	41.0	6.3	19.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
17.03.2023	7:00-7:00	61.2	22.1	42.1	5.8	21.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18.03.2023	7:15-7:15	61.7	21.9	42.5	6.9	18.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
24.03.2023	7:00-7:00	61.8	21.4	41.1	5.4	21.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25.03.2023	7:15-7:15	61.4	22.2	42.0	6.6	19.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
31.03.2023	7:00-7:00	61.3	21.8	40.9	5.3	22.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
01.04.2023	7:15-7:15	61.8	21.9	41.5	6.2	19.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
07.04.2023	7:00-7:00	61.4	22.6	40.6	5.8	19.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
08.04.2023	7:15-7:15	60.2	22.7	41.4	6.2	22.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
14.04.2023	7:00-7:00	60.4	21.0	40.2	5.5	18.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
15.04.2023	7:15-7:15	60.5	22.6	41.5	6.1	21.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
21.04.2023	7:00-7:00	61.2	21.1	39.9	5.7	21.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
22.04.2023	7:15-7:15	61.3	21.3	40.1	6.0	20.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
28.04.2023	7:00-7:00	62.7	21.2	40.6	5.8	19.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
29.04.2023	7:15-7:15	62.4	22.1	40.9	5.7	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
05.05.2023	7:00-7:00	62.8	22.6	41.3	5.6	19.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
06.05.2023	7:15-7:15	60.4	22.1	41.0	6.1	19.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
12.05.2023	7:00-7:00	60.9	23.8	41.5	6.9	18.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13.05.2023	7:15-7:15	61.8	22.9	41.6	5.3	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
19.05.2023	7:00-7:00	61.5	23.7	40.9	6.5	19.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20.05.2023	7:15-7:15	62.2	22.8	41.2	5.1	22.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26.05.2023	7:00-7:00	62.9	23.1	42.8	6.5	19.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27.05.2023	7:15-7:15	64.7	23.4	42.5	6.8	20.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Note: BDL: Below Detection Limit ;DL: Detection Limit ; NH₃: BDL (DL:20); O₃: BDL (DL: 20); CO: BDL (DL:1.0);
Pb: BDL (DL:0.1); Ni: BDL (DL:1.0); As: BDL (DL:1.0); C₆H₆: BDL (DL:1.0); BaP: BDL (DL:0.1)

Remarks: The values observed for the pollutants given above are within the CPCB standards.

End of Report

For Chennai Mettex Lab Private Limited



Reviewed & Authorized By
[Signature]
P. KANISHA

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CHENNAI METTEX LAB PRIVATE LIMITED[®]

Jothi Complex, 83, M.K.N. Road, Guindy, Chennai - 600 032, Tamil Nadu, INDIA
Phone : +91 44 22323163, 22311034, 42179490, 42179491 | CIN : U74999TN2008FTC069459
Email : test@mettexlab.com | Web : www.mettexlab.com

TEST REPORT

ISSUED TO: Tvl. Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A,
15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7,
Sirumaitour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18281

Test Certificate Date : 06.06.2023

Sample Description : Ambient Noise Monitoring

Location of Sampling : N1 - Core zone - 12°43'11.73"N 79°50'32.55"E

Location of Sampling : N2 - Madhur - 12°43'16.73"N 79°50'14.09"E

Sampling Plan & Procedure: IS 9989:1981 & CML/LAB/ENV/SOP/10

Sampling Instrument : CML/ENV/SLM/001 & CML/ENV/SLM/002

Sampling Date: 10.04.2023

Location	N1 - Core zone			N2 - Madhur		
	Min	Max	Result	Min	Max	Result
Parameter	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
06:00-07:00	31.9	42.5	39.9	31.3	43.5	40.7
07:00-08:00	33.7	45.2	42.5	36.4	44.5	42.1
08:00-09:00	35.1	46.9	44.2	35.6	45.9	43.3
09:00-10:00	36.2	47.2	44.5	31.2	46.7	43.8
10:00-11:00	34.2	49.2	46.3	31.7	47.5	44.6
11:00-12:00	35.9	49.6	47.0	32.9	41.2	38.0
12:00-13:00	32.7	46.4	43.6	35.4	43.1	40.9
13:00-14:00	33.2	45.6	43.0	35.9	42.9	40.7
14:00-15:00	31.4	44.2	41.4	37.2	46.6	45.9
15:00-16:00	36.6	39.6	38.4	36.9	44.7	42.4
16:00-17:00	35.7	40.4	38.7	35.1	46.3	43.0
17:00-18:00	32.3	38.2	36.2	33.8	41.7	39.3
18:00-19:00	33.4	40.5	38.3	31.7	39.1	38.8
19:00-20:00	31.9	41.7	39.1	32.9	40.7	38.4
20:00-21:00	35.7	40.3	35.6	33.7	41.3	39.0
21:00-22:00	33.4	43.9	41.3	35.1	44.7	42.1
22:00-23:00	36.4	42.7	41.1	32.0	40.3	38.0
23:00-00:00	32.9	39.5	37.3	33.7	41.4	39.1
00:00-01:00	34.5	40.3	38.3	32.9	40.2	37.9
01:00-02:00	35.1	41.9	39.4	31.9	37.7	35.7
02:00-03:00	32.9	38.3	36.4	33.6	38.4	36.7
03:00-04:00	32.9	40.7	38.4	33.7	36.7	35.5
04:00-05:00	33.6	41.5	38.1	31.5	35.9	34.2
05:00-06:00	31.2	40.2	37.7	31.9	36.5	34.6
Result	Day Means		41.4	Day Means		41.2
	Night Means		38.1	Night Means		36.3

Note: CPCB Norms Industrial Area Day Time:75 dB(A), Night Time:70 dB(A)
The Noise level in the above location exists within the permissible limits of CPCB.

End of Report

For Chennai Mettex Lab Private Limited



Reviewed & Authorized By

P. KAVITHA
Technical Manager
Ambient Laboratory



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Email : test@mettexlab.com | Web : www.mettexlab.com

TEST REPORT

ISSUED TO: Tvi. Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A,
15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7,
Sirumailour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18282

Test Certificate Date : 06.06.2023

Sample Description : Ambient Noise Monitoring

Location of Sampling : N3 – Pullampakkam - 12°45'13.72"N 79°50'29.29"E

Location of Sampling : N4 – Anambakkam - 12°42'9.96"N 79°50'40.09"E

Sampling Plan & Procedure: IS 9989:1981 & CML/LAB/ENV/SOP/10

Sampling Instrument ID : CML/ENV/SLM/003 & CML/ENV/SLM/004

Sampling Date : 10.04.2023

Location	N3 – Pullampakkam			N4 – Anambakkam		
	Min	Max	Result	Min	Max	Result
Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
06:00-07:00	33.9	40.5	38.3	32.3	42.5	39.9
07:00-08:00	36.1	43.6	41.3	31.9	45.2	42.4
08:00-09:00	33.2	44.9	42.2	35.3	45.9	43.3
09:00-10:00	34.7	43.2	40.8	36.2	44.7	42.3
10:00-11:00	31.6	40.9	38.4	32.7	45.6	42.8
11:00-12:00	32.5	41.2	38.7	33.2	45.2	42.5
12:00-13:00	36.2	43.2	41.0	33.2	46.8	43.9
13:00-14:00	35.9	44.8	42.3	38.1	46.1	43.7
14:00-15:00	31.9	39.1	36.8	32.7	44.5	41.8
15:00-16:00	33.6	41.4	39.1	36.9	45.7	43.2
16:00-17:00	31.5	39.2	36.9	33.7	41.7	39.3
17:00-18:00	32.8	40.7	38.3	36.2	43.5	41.2
18:00-19:00	32.6	40.3	38.0	37.5	44.9	42.6
19:00-20:00	32.7	41.7	39.2	36.1	42.6	40.5
20:00-21:00	33.9	42.5	40.1	33.2	41.3	38.9
21:00-22:00	34.2	43.1	40.6	36.9	43.5	41.3
22:00-23:00	36.1	45.9	43.3	35.2	42.9	40.6
23:00-00:00	33.8	41.7	39.3	34.2	43.6	41.1
00:00-01:00	31.9	40.3	37.9	36.9	42.8	40.8
01:00-02:00	33.1	41.9	39.4	37.5	41.7	40.1
02:00-03:00	32.9	33.9	33.4	33.8	35.8	34.9
03:00-04:00	31.3	34.8	33.4	33.6	36.6	34.8
04:00-05:00	33.8	36.5	35.4	33.7	37.7	36.1
05:00-06:00	31.9	38.5	36.3	31.4	39.7	37.3
Result	Day Means		36.1	Day Means		41.8
	Night Means		33.9	Night Means		37.9

Note: CPCB Norms Residential Area Day Time:55 dB(A); Night Time:45 dB(A)

The Noise level in the above location exists within the permissible limits of CPCB.

End of Report

For Chennai Mettex Lab Private Limited



[Signature]
Reviewed & Authorized By

P. KAVITHA
Technical Manager
Authorized Signatory

NOTE: Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders will be liable for legal action. Unless otherwise stated the submitted results in this test report refer only to the samples tested and such samples are retained for 15 days only from the completion date of testing - except in case of regulatory samples, which will be retained for a specific period as per statutory requirement, while perishable & environmental testing related test samples will be discarded consequent upon completion of testing. Samples are not drawn by us unless otherwise stated. This document cannot be reproduced except in full, without prior written approval of the laboratory. This report is for the exclusive use of Chennai Mettex Lab's customer, and is provided in accordance with the agreement between Chennai Mettex Lab and its Customer.



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Email : test@mettexlab.com | Web : www.mettexlab.com

TEST REPORT

ISSUED TO: Tvl. Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A,
15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7,
Sirumailour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18283

Test Certificate Date : 06.06.2023

Sample Description : Ambient Noise Monitoring

Location of Sampling : N5 – Nariambakkam - 12°42'0.49"N 79°48'29.25"E

Location of Sampling : N6 – Kavanipakkam - 12°43'15.94"N 79°53'31.05"E

Sampling Plan & Procedure: IS 9989:1981 & CML/LAB/ENV/SOP/10

Sampling Instrument : CML/ENV/SLM/001 & CML/ENV/SLM/002

Sampling Date : 17.05.2023

Location	N5 – Nariambakkam			N6 – Kavanipakkam		
	Min	Max	Result	Min	Max	Result
Parameter	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
06:00-07:00	32.6	40.3	38.0	32.9	35.5	34.4
07:00-08:00	34.9	42.4	40.1	31.3	39.7	37.3
08:00-09:00	32.6	43.9	41.2	32.6	41.6	39.1
09:00-10:00	33.6	41.3	39.0	33.7	42.8	40.3
10:00-11:00	32.8	48.5	45.6	34.6	44.6	42.0
11:00-12:00	31.2	47.2	44.3	36.2	45.8	43.2
12:00-13:00	36.4	44.7	42.3	38.2	46.2	43.8
13:00-14:00	33.9	41.4	39.1	36.4	45.1	42.6
14:00-15:00	32.7	43.9	41.2	36.9	43.4	41.3
15:00-16:00	36.5	45.7	43.2	34.6	42.9	40.5
16:00-17:00	32.3	40.9	38.5	32.7	40.7	38.3
17:00-18:00	34.2	43.2	40.7	36.9	43.2	41.1
18:00-19:00	34.7	44.9	42.3	32.1	40.6	38.2
19:00-20:00	31.6	40.7	38.2	34.9	43.2	40.8
20:00-21:00	32.8	40.3	38.0	32.6	40.7	38.3
21:00-22:00	33.6	41.4	39.1	33.7	41.3	39.0
22:00-23:00	32.5	40.3	38.0	34.3	36.4	35.5
23:00-00:00	36.4	45.2	42.7	32.6	42.8	40.2
00:00-01:00	33.6	35.0	34.4	35.8	40.2	38.5
01:00-02:00	34.9	34.8	34.9	33.6	38.8	36.9
02:00-03:00	31.5	35.1	33.7	31.2	37.1	35.1
03:00-04:00	32.3	36.6	35.0	32.4	35.7	34.4
04:00-05:00	31.7	36.7	34.9	31.6	39.5	37.1
05:00-06:00	32.2	35.5	34.2	33.9	36.6	35.5
Result	Day Means		40.5	Day Means		39.7
	Night Means		35.7	Night Means		36.8

Note: CPCB Norms Residential Area Day Time:55 dB(A); Night Time:45 dB(A)

The Noise level in the above location exists within the permissible limits of CPCB.

End of Report

For Chennai Mettex Lab Private Limited



[Signature]
Reviewed & Authorized By

P. KAVITHA
Technical Manager

NOTE: Any unauthorized alteration, forgery or fabrication of the content or appearance of this document is unlawful and reflects on the integrity of the laboratory. Unless otherwise stated the submitted results in this test report refer only to the sample(s) tested and such sample(s) are retained for 15 days only from the completion date of testing - except in case of regulatory samples, which will be retained for a specific period as per statutory requirements, while perishable & environmental testing related resistant samples will be discarded consequent upon completion of testing. Samples are not drawn by us unless otherwise stated. This document cannot be reproduced except in full, without prior written approval of the laboratory. This report is for the exclusive use of Chennai Mettex Lab's customer, and is provided in accordance with the agreement between Chennai Mettex Lab and its Customer.



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Email : test@mettexlab.com | Web : www.mettexlab.com

TEST REPORT

ISSUED TO: Tvl. Murugappa Blue Metals

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P), 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A,
15/13B, 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P), 16/5 (P), 16/7,
Sirumailour Village, Uthiramerur Taluk, Kancheepuram District.

Test Certificate No : CML/23-24/18284

Test Certificate Date : 06.06.2023

Sample Description : Ambient Noise Monitoring

Location of Sampling : N7 - Vayalakovur - 12°44'4.81"N 79°49'19.60"E

N8 - Sirumailur - 12°44'17.87"N 79°52'4.21"E

Sampling Plan & Procedure: IS 9989:1981 & CML/LAB/ENV/SOP/10

Sampling Instrument ID : CML/ENV/SLM/003 & CML/ENV/SLM/004

Sampling Date : 17.05.2023						
Location	N7 - Vayalakovur			N8 - Sirumailur		
Parameter	Min	Max	Result	Min	Max	Result
Time	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
06:00-07:00	33.6	37.9	36.3	34.2	39.8	37.8
07:00-08:00	34.9	38.5	37.1	35.6	40.2	38.5
08:00-09:00	37.7	38.4	38.1	37.4	41.3	39.8
09:00-10:00	35.5	39.2	37.7	36.6	42.3	40.3
10:00-11:00	36.1	41.3	39.4	37.5	43.5	41.5
11:00-12:00	36.8	41.8	40.0	35.5	42.1	39.9
12:00-13:00	33.9	41.8	39.4	33.2	41.7	39.3
13:00-14:00	34.5	47.6	44.8	37.1	42.6	40.7
14:00-15:00	36.6	46.6	44.0	38.7	44.2	42.3
15:00-16:00	37.1	45.5	43.1	34.5	42.7	40.3
16:00-17:00	37.2	47.2	44.6	36.2	43.9	41.6
17:00-18:00	36.5	45.9	43.4	38.4	48.5	45.9
18:00-19:00	39.4	46.3	44.1	34.6	43.8	41.3
19:00-20:00	32.6	41.2	38.8	36.4	43.2	41.0
20:00-21:00	36.1	44.3	41.9	35.6	46.5	43.8
21:00-22:00	37.5	45.5	43.1	42.3	51.2	48.7
22:00-23:00	35.4	46.2	43.5	38.4	44.6	42.2
23:00-00:00	36.2	40.5	38.9	34.2	43.8	41.2
00:00-01:00	35.9	40.1	38.5	33.5	41.4	39.0
01:00-02:00	35.2	39.6	37.9	31.6	38.5	36.3
02:00-03:00	36.1	41.3	39.4	35.1	39.7	38.0
03:00-04:00	35.7	40.1	38.4	34.6	40.1	38.2
04:00-05:00	34.9	38.9	37.3	35.5	39.1	37.7
05:00-06:00	33.3	35.8	34.7	33.6	37.8	36.2
Result	Day Means		41.1	Day Means		41.5
	Night Means		37.9	Night Means		36.1

Note: CPCB Norms Residential Area. Day Time:55 dB(A); Night Time:45 dB(A)

The Noise level in the above location exists within the permissible limits of CPCB.

End of Report

For Chennai Mettex Lab Private Limited



Reviewed & Authorized By

P. KAVITHA
Technical Manager
Authorized Signatory



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TEST REPORT

Page No:1 of 2

ISSUED TO : Tvl. Murugappa Blue Metals

T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
 16/5 (P), 16/7, Sirumailour Village, Uthiramerur Taluk,
 Kancheepuram District.

T.C No : CML/23-24/18285

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023.

Lab No : 24016931

Sample Description : Surface Water (SW-1) - Lake Near Neerkundram
(as stated by customer)

TEST	PROTOCOL	RESULTS
Discipline: Chemical		Group: Water
Colour	IS 3025 Part 4:1983 (Reaff.2017)	5 Hazen
Odour	IS 3025 Part 5:2018	Agreeable
pH at 25°C	IS 3025 Part 11:1983 (Reaff.2017)	7.59
Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff.2019)	1137 µmhos/cm
Turbidity	IS 3025 Part 10:1984 (Reaff.2017)	3.1 NTU
Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff.2017)	671 mg/l
Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff.2019)	163.51 mg/l
Calcium as Ca	IS 3025 Part 40:1991 (Reaff.2019)	30.6 mg/l
Magnesium as Mg	IS 3025 Part 46:1994 (Reaff.2019)	21.2 mg/l
Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff.2019)	240 mg/l
Chloride as Cl	IS 3025 Part 32:1988 (Reaff.2019)	192.4 mg/l
Sulphate as SO ₄	IS 3025 Part 24:1986 (Reaff.2019)	88 mg/l
Iron as Fe	IS 3025 Part 53:2003 (Reaff.2019)	0.39 mg/l
Residual Free Chlorine	IS 3025 Part 26:1986 (Reaff.2019)	BDL (DL:0.1 mg/l)
Fluoride as F	APHA 23 rd Edn. 2017:4500 F,D	0.31 mg/l
Nitrate as NO ₃	IS 3025 Part 34:1988 (Reaff.2019)	7.6 mg/l
Copper as Cu	IS 3025 Part 65:2014 (Reaff.2018)	BDL (DL:0.01 mg/l)
Manganese as Mn	IS 3025 Part 65:2014 (Reaff.2018)	BDL (DL:0.02 mg/l)
Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
Cadmium as Cd	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.001 mg/l)
Selenium as Se	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.005 mg/l)

...Contd....2



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Lab No: 24016931 T.C No: CML/23-24/18285 Dated : 06.06.2023

Page No. 2 of 2

TEST	PROTOCOL	RESULTS
Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)
Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
Mineral Oil	IS 3025 Part 39-1991 (Reaff: 2019)	BDL(DL : 0.01 mg/l)
Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)
Anionic Detergents (as MBAS)	IS 1342B - 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)
Cyanide as CN	IS 3025 Part 27-1986 (Reaff: 2019)	BDL (DL:0.01 mg/l)
BOD @ 27°C for 3 days	IS 3025 Part 44: 1993 (Reaff:2019)	9.5 mg/l
Chemical Oxygen Demand	IS 3025 Part 58:2006 (Reaff:2017)	40 mg/l
Dissolved Oxygen	IS 3025 Part 38: 1989 (Reaff:2019)	5.2 mg/l
Barium as Ba	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL:0.05 mg/l)
Ammonia (as total ammonia-N)	IS 3025 Part 34-1988 (Reaff: 2019)	BDL (DL:0.01 mg/l)
Sulphide as H ₂ S	IS 3025 Part 29-1986 (Reaff: 2019)	BDL (DL:0.01 mg/l)
Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
Total Arsenic as As	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Total Suspended Solids	IS 3025 Part 17 -1984 (Reaff:2017)	8.1 mg/l
Discipline: Biological	Group: Water	
Total Coliform	APHA 23 rd Edn. 2017.9221B	920 MPN/100ml
<i>Escherichia coli</i>	APHA 23 rd Edn. 2017.9221F	110 MPN/100ml
Note : APHA – American Public Health Association, BDL – Below Detection Limit, DL – Detection Limit, MPN – Most Probable Number.		

End of Report

For Chennai Mettex Lab Private Limited

Reviewed & Authorized By

B. ARUNAN
 Technical Manager
 Authorized Signatory



Reviewed & Authorized By

P. KAVITHA
 Technical Manager
 Authorized Signatory



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TEST REPORT

Page No.1 of 2

ISSUED TO : Tvi. Murugappa Blue Metals

T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
 16/5 (P), 16/7, Sirumaidour Village, Uthiramerur Taluk,
 Kancheepuram District.

T.C No : CML/23-24/18286

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023.

Lab No : 24016932

Sample Description : Surface Water (SW-2) – Cheyyaru
(as stated by customer)

TEST	PROTOCOL	RESULTS
Discipline: Chemical	Group: Water	
Colour	IS 3025 Part 4:1983 (Reaff.2017)	10 Hazen
Odour	IS 3025 Part 5:2018	Agreeable
pH at 25°C	IS 3025 Part 11:1983 (Reaff.2017)	7.51
Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff.2019)	1281 µmhos/cm
Turbidity	IS 3025 Part 10:1984 (Reaff.2017)	4.1 NTU
Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff.2017)	755 mg/l
Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff.2019)	215.54 mg/l
Calcium as Ca	IS 3025 Part 40:1991 (Reaff.2019)	38.6 mg/l
Magnesium as Mg	IS 3025 Part 46:1994 (Reaff.2019)	29 mg/l
Total Alkalinity as CaCO ₃	IS 3025 Part 23:1988 (Reaff.2019)	288 mg/l
Chloride as Cl	IS 3025 Part 32:1988 (Reaff.2019)	216.5 mg/l
Sulphate as SO ₄	IS 3025 Part 24:1988 (Reaff.2019)	91.4 mg/l
Iron as Fe	IS 3025 Part 53:2003 (Reaff.2019)	0.39 mg/l
Residual Free Chlorine	IS 3025 Part 26:1988 (Reaff.2019)	BDL (DL:0.1 mg/l)
Fluoride as F	APHA 23 rd Edn. 2017:4500 F,D	0.15 mg/l
Nitrate as NO ₃	IS 3025 Part 34:1988 (Reaff.2019)	5.7 mg/l
Copper as Cu	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.01 mg/l)
Manganese as Mn	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.02 mg/l)
Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
Cadmium as Cd	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.001 mg/l)
Selenium as Se	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.005 mg/l)

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Email : test@mettexlab.com | Web : www.mettexlab.com

Lab No: 24016932 T.C No: CML/23-24/18286 Dated : 06.06.2023

Page No. 2 of 2

TEST	PROTOCOL	RESULTS
Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)
Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
Mineral Oil	IS 3025 Part 39-1991 (Reaff: 2019)	BDL(DL : 0.01 mg/l)
Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)
Anionic Detergents (as MBAS)	IS 13428 - 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)
Cyanide as CN	IS 3025 Part 27-1986 (Reaff: 2019)	BDL (DL:0.01 mg/l)
BOD @ 27°C for 3 days	IS 3025 Part 44:1993 (Reaff:2019)	5.1 mg/l
Chemical Oxygen Demand	IS 3025 Part 58:2006 (Reaff:2017)	32 mg/l
Dissolved Oxygen	IS 3025 Part 38:1989 (Reaff:2019)	5.6 mg/l
Barium as Ba	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL:0.05 mg/l)
Ammonia (as total ammonia-N)	IS 3025 Part 34-1988 (Reaff: 2019)	1.9 mg/l
Sulphide as H ₂ S	IS 3025 Part 29-1986 (Reaff: 2019)	BDL (DL:0.01 mg/l)
Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
Total Arsenic as As	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Total Suspended Solids	IS 3025 Part 17 -1984 (Reaff:2017)	10.2 mg/l
Discipline: Biological	Group: Water	
Total Coliform	APHA 23 rd Edn. 2017:9221B	1600 MPN/100ml
<i>Escherichia coli</i>	APHA 23 rd Edn. 2017:9221F	170 MPN/100ml
Note : APHA – American Public Health Association, BDL – Below Detection Limit, DL – Detection Limit, MPN – Most Probable Number.		

End of Report

For Chennai Mettex Lab Private Limited

Reviewed & Authorized By
B. ARUNAN
Technical Manager
Authorized Signatory



Reviewed & Authorized By
P. KAVITHA
Technical Manager
Authorized Signatory



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TEST REPORT

Page No.1 of 1

ISSUED TO : Tyl. Murugappa Blue Metals

T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
16/5 (P), 16/7, Srumailour Village, Uthiramerur Taluk,
Kancheepuram District.

T.C No : CML/23-24/18287

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023.

Lab No : 24016933

Sample Description : Ground Water (WW-1) – Near Project Area
(as stated by customer)

TEST	PROTOCOL	RESULTS
Discipline: Chemical		Group: Water
Colour	IS 3025 Part 4:1983 (Reaff:2017)	5
Odour	IS 3025 Part 5:2018	Agreeable
pH at 25°C	IS 3025 Part 11:1983 (Reaff:2017)	8.01
Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff:2019)	1005 µmhos/cm
Turbidity	IS 3025 Part 10:1984 (Reaff:2017)	1.1 NTU
Total Dissolved Solids	IS 3025 Part 18:1984 (Reaff:2017)	593 mg/l
Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff:2019)	181.80 mg/l
Calcium as Ca	IS 3025 Part 40:1991 (Reaff:2019)	37.6 mg/l
Magnesium as Mg	IS 3025 Part 46:1994 (Reaff:2019)	21.4 mg/l
Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff:2019)	179.2 mg/l
Chloride as Cl	IS 3025 Part 32:1988 (Reaff:2019)	150 mg/l
Sulphate as SO ₄	IS 3025 Part 24:1986 (Reaff:2019)	80.1 mg/l
Iron as Fe	IS 3025 Part 53:2005 (Reaff:2019)	0.19 mg/l
Residual Free Chlorine	IS 3025 Part 26:1986 (Reaff:2019)	BDL (DL:0.1 mg/l)
Fluoride as F	APHA 23 rd Edn. 2017:4500 F.D	0.16 mg/l
Nitrate as NO ₃	IS 3025 Part 34:1986 (Reaff:2019)	4.9 mg/l
Copper as Cu	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.01 mg/l)
Manganese as Mn	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
Cadmium as Cd	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.001 mg/l)
Selenium as Se	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)

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Email : test@mettexlab.com | Web : www.mettexlab.com

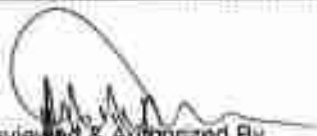
Lab No: 24016933 T.C No: CML/23-24/16287 Dated : 06.06.2023

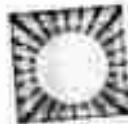
Page No. 2 of 2

TEST	PROTOCOL	RESULTS
Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)
Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
Mineral Oil	IS 3025 Part 39:1991 (Reaff. 2019)	BDL(DL : 0.01 mg/l)
Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43:1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)
Anionic Detergents (as MBAS)	IS 13428 - 2005 (Reaff:2019) (Annex K)	BOL (DL:0.01 mg/l)
Cyanide as CN	IS 3025 Part 27:1986 (Reaff. 2019)	BDL (DL:0.01 mg/l)
Barium as Ba	IS 3025 Part 44:1993 (Reaff:2019)	BDL(DL:0.05 mg/l)
Ammonia (as total ammonia-N)	IS 3025 Part 58:2006 (Reaff:2017)	BDL (DL:0.01 mg/l)
Sulphide as H ₂ S	IS 3025 Part 35:1989 (Reaff:2019)	BDL (DL:0.01 mg/l)
Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
Total Arsenic as As	IS 3025 Part 34:1988 (Reaff. 2019)	BDL (DL:0.005 mg/l)
Total Suspended Solids	IS 3025 Part 29:1986 (Reaff. 2019)	BDL (DL:1.0 mg/l)
Discipline: Biological	Group: Water	
Total Coliform	APHA 23 rd Edn. 2017:9221B	120 MPN/100ml
Escherichia coli	APHA 23 rd Edn. 2017:9221F	< 1.8 MPN/100ml
Note : APHA – American Public Health Association, BDL – Below Detection Limit, DL – Detection Limit, MPN – Most Probable Number < 1.8 MPN/100ml can be taken as "No Microbial Growth".		

End of Report

For Chennai Mettex Lab Private Limited


Reviewed & Authorized By
B. ARUNAN
Technical Manager
Authorized Signatory




Reviewed & Authorized By
P. KAVITHA
Technical Manager
Authorized Signatory



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TEST REPORT

Page No. 1 of 2

ISSUED TO : Tvl. Murugappa Blue Metals.

T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
16/5 (P), 16/7, Sirumailour Village, Lithiramerur Taluk,
Kancheepuram District.

T.C No : CML/23-24/18288

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023.

Lab No : 24016934

Sample Description : Ground Water (WW-2) – Sirumailur
(as stated by customer)

TEST	PROTOCOL	RESULTS
Discipline: Chemical		Group: Water
Colour	IS 3025 Part 4:1983 (Reaff.2017)	5 Hazen
Odour	IS 3025 Part 5:2018	Agreeable
pH at 25°C	IS 3025 Part 11:1983 (Reaff.2017)	7.71
Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff.2019)	1235 µmhos/cm
Turbidity	IS 3025 Part 10:1984 (Reaff.2017)	1.0 NTU
Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff.2017)	729 mg/l
Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff.2019)	201.05 mg/l
Calcium as Ca	IS 3025 Part 40:1991 (Reaff.2019)	35.1 mg/l
Magnesium as Mg	IS 3025 Part 46:1994 (Reaff.2019)	27.8 mg/l
Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff.2019)	294.3 mg/l
Chloride as Cl	IS 3025 Part 32:1986 (Reaff.2019)	164 mg/l
Sulphate as SO ₄	IS 3025 Part 24:1986 (Reaff.2019)	95.7 mg/l
Iron as Fe	IS 3025 Part 53:2003 (Reaff.2019)	0.11 mg/l
Residual Free Chlorine	IS 3025 Part 26:1986 (Reaff.2019)	BDL (DL:0.1 mg/l)
Fluoride as F	APHA 23 rd Edn. 2017.4500 F,D	0.19 mg/l
Nitrate as NO ₃	IS 3025 Part 34:1988 (Reaff.2019)	7.1 mg/l
Copper as Cu	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.01 mg/l)
Manganese as Mn	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.02 mg/l)
Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
Cadmium as Cd	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.001 mg/l)
Selenium as Se	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.005 mg/l)

...Contd....2

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Lab No: 24016934 T.C No: CML/23-24/18288 Dated : 06.06.2023

Page No. 2 of 2

TEST	PROTOCOL	RESULTS
Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.05 mg/l)
Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.05 mg/l)
Mineral Oil	IS 3025 Part 39:1991 (Reaff:2019)	BDL (DL:0.01 mg/l)
Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43:1992 (Reaff:2019)	BDL (DL:0.0005 mg/l)
Anionic Detergents (as MBAS)	IS 13428 - 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)
Cyanide as CN	IS 3025 Part 27:1986 (Reaff:2019)	BDL (DL:0.01 mg/l)
Barium as Ba	IS 3025 Part 44:1993 (Reaff:2019)	BDL (DL:0.05 mg/l)
Ammonia (as total ammonia-N)	IS 3025 Part 58:2008 (Reaff:2017)	BDL (DL:0.01 mg/l)
Sulphide as H ₂ S	IS 3025 Part 38:1989 (Reaff:2019)	BDL (DL:0.01 mg/l)
Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
Total Arsenic as As	IS 3025 Part 34:1985 (Reaff:2019)	BDL (DL:0.005 mg/l)
Total Suspended Solids	IS 3025 Part 29:1986 (Reaff:2019)	BDL (DL:1.0 mg/l)
Discipline: Biological		Group: Water
Total Coliform	APHA 23 rd Edn. 2017:9221B	110 MPN/100ml
Escherichia coli	APHA 23 rd Edn. 2017:9221F	< 1.8 MPN/100ml
Note : APHA - American Public Health Association, BDL - Below Detection Limit, DL - Detection Limit, MPN - Most Probable Number, < 1.8 MPN/100ml can be taken as "No Microbial Growth"		

End of Report

For Chennai Mettex Lab Private Limited


Reviewed & Authorized By
B. ARUNAN
Technical Manager
Authorized Signatory




Reviewed & Authorized By
P. KAVITHA
Technical Manager
Authorized Signatory



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TEST REPORT

Page No.1 of 2

ISSUED TO : Tvl. Murugappa Blue Metals

T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
 16/5 (P), 16/7, Sirumailour Village, Uthiramerur Taluk,
 Kancheepuram District.

T.C No : CML/23-24/18289

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023.

Lab No : 24018635

Sample Description : Ground Water (BW-1) – Near Project Area
(as stated by customer)

TEST	PROTOCOL	RESULTS
Discipline: Chemical		Group: Water
Colour	IS 3025 Part 4:1983 (Reaff:2017)	5 Hazen
Odour	IS 3025 Part 5:2018	Agreeable
pH at 25°C	IS 3025 Part 11:1983 (Reaff:2017)	6.99
Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff:2019)	1181 µmhos/cm
Turbidity	IS 3025 Part 10:1984 (Reaff:2017)	1.0 NTU
Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff:2017)	597 mg/l
Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff:2019)	169.98 mg/l
Calcium as Ca	IS 3025 Part 40:1991 (Reaff:2019)	32.7 mg/l
Magnesium as Mg	IS 3025 Part 46:1994 (Reaff:2019)	21.5 mg/l
Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff:2019)	287 mg/l
Chloride as Cl	IS 3025 Part 32:1988 (Reaff:2019)	170 mg/l
Sulphate as SO ₄	IS 3025 Part 24:1985 (Reaff:2019)	70.3 mg/l
Iron as Fe	IS 3025 Part 53:2003 (Reaff:2019)	0.25 mg/l
Residual Free Chlorine	IS 3025 Part 26:1985 (Reaff:2019)	BDL (DL:0.1 mg/l)
Fluoride as F	APHA 23 rd Edn. 2017:4500 F.D	0.12 mg/l
Nitrate as NO ₃	IS 3025 Part 34:1988 (Reaff:2019)	7.1 mg/l
Copper as Cu	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.01 mg/l)
Manganese as Mn	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
Cadmium as Cd	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.001 mg/l)
Selenium as Se	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)

...Contd....2

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Email : test@mettexlab.com | Web : www.mettexlab.com

Lab No: 24016935 T.C No: CML/23-24/16289 Dated : 06.06.2023

Page No. 2 of 2

TEST	PROTOCOL	RESULTS
Aluminium as Al	IS 3025 Part 65-2014 (Reaff.2019)	BDL (DL:0.005 mg/l)
Lead as Pb	IS 3025 Part 65-2014 (Reaff.2019)	BDL (DL:0.005 mg/l)
Zinc as Zn	IS 3025 Part 65-2014 (Reaff.2019)	BDL(DL - 0.05 mg/l)
Total Chromium as Cr	IS 3025 Part 65-2014 (Reaff.2019)	BDL(DL - 0.02 mg/l)
Boron as B	IS 3025 Part 65-2014 (Reaff.2019)	BDL(DL - 0.05 mg/l)
Mineral Oil	IS 3025 Part 39-1991 (Reaff. 2019)	BDL(DL - 0.01 mg/l)
Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff. 2019)	BDL (DL:0.0005 mg/l)
Anionic Detergents (as MBAS)	IS 13428 - 2005 (Reaff.2019) (Annex K)	BDL (DL:0.01 mg/l)
Cyanide as CN	IS 3025 Part 27-1986 (Reaff. 2019)	BDL (DL:0.01 mg/l)
Barium as Ba	IS 3025 Part 44-1993 (Reaff.2019)	BDL(DL:0.05 mg/l)
Ammonia (as total ammonia-N)	IS 3025 Part 58-2006 (Reaff.2017)	BDL (DL:0.01 mg/l)
Sulphide as H ₂ S	IS 3025 Part 38-1989 (Reaff.2019)	BDL (DL:0.01 mg/l)
Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff.2019)	BOL (DL:0.02 mg/l)
Total-Arsenic as As	IS 3025 Part 34-1988 (Reaff. 2019)	BDL (DL:0.005 mg/l)
Total Suspended Solids	IS 3025 Part 29-1986 (Reaff. 2019)	BDL (DL:1.0 mg/l)
Discipline: Biological	Group: Water	
Total Coliform	APHA 23 ^d Edn. 2017:9221B	BD MPN/100ml
Escherichia coli	APHA 23 rd Edn. 2017:9221F	< 1.8 MPN/100ml
Note : APHA - American Public Health Association, BDL - Below Detection Limit, DL - Detection Limit, MPN - Most Probable Number, < 1.8 MPN/100ml can be taken as 'No Microbial Growth'		

End of Report

For Chennai Mettex Lab Private Limited

Reviewed & Authorized By

B. ARUNAN
Technical Manager
Authorised Signatory



Reviewed & Authorized By

P. KAVITHA
Technical Manager
Authorised Signatory



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ISSUED TO : Tvl. Murugappa Blue Metals

T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
 16/5 (P), 16/7, Sirumalour Village, Uthiramerur Taluk,
 Kancheepuram District.

T.C No : CML/23-24/18290

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023

Lab No : 24018936

Sample Description : Ground Water (BW-2) – Nariambakkam
(as stated by customer)

TEST	PROTOCOL	RESULTS
Discipline: Chemical		Group: Water
Colour	IS 3025 Part 4:1983 (Reaff.2017)	5 Hazen
Odour	IS 3025 Part 5:2015	Agreeable
pH at 25°C	IS 3025 Part 11:1983 (Reaff.2017)	7.07
Conductivity @ 25°C	IS 3025 Part 14:2013 (Reaff.2019)	907 µmhos/cm
Turbidity	IS 3025 Part 10:1984 (Reaff.2017)	1.0 NTU
Total Dissolved Solids	IS 3025 Part 16:1984 (Reaff.2017)	535 mg/l
Total Hardness as CaCO ₃	IS 3025 Part 21:2009 (Reaff.2019)	146.26 mg/l
Calcium as Ca	IS 3025 Part 40:1991 (Reaff.2019)	25.5 mg/l
Magnesium as Mg	IS 3025 Part 46:1994 (Reaff.2019)	20.1 mg/l
Total Alkalinity as CaCO ₃	IS 3025 Part 23:1986 (Reaff.2019)	191.5 mg/l
Chloride as Cl	IS 3025 Part 32:1988 (Reaff.2019)	135 mg/l
Sulphate as SO ₄	IS 3025 Part 24:1986 (Reaff.2019)	67.3 mg/l
Iron as Fe	IS 3025 Part 53:2003 (Reaff.2019)	0.25 mg/l
Residual Free Chlorine	IS 3025 Part 26:1986 (Reaff.2019)	BDL (DL:0.1 mg/l)
Fluoride as F	APHA 23 rd Edn, 2017.4500 F.D	0.20 mg/l
Nitrate as NO ₃	IS 3025 Part 34:1986 (Reaff.2019)	6.3 mg/l
Copper as Cu	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.01 mg/l)
Manganese as Mn	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.02 mg/l)
Mercury as Hg	USEPA 200.8	BDL (DL:0.0005 mg/l)
Cadmium as Cd	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.001 mg/l)
Selenium as Se	IS 3025 Part 65:2014 (Reaff.2019)	BDL (DL:0.005 mg/l)

...Contd....2



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Lab No: 24016936 T.C No: CML/23-24/18290 Dated : 06.08.2023

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TEST	PROTOCOL	RESULTS
Aluminium as Al	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Lead as Pb	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.005 mg/l)
Zinc as Zn	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
Total Chromium as Cr	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.02 mg/l)
Boron as B	IS 3025 Part 65:2014 (Reaff:2019)	BDL(DL : 0.05 mg/l)
Mineral Oil	IS 3025 Part 39-1991 (Reaff: 2019)	BDL(DL : 0.01 mg/l)
Phenolic compounds as C ₆ H ₅ OH	IS 3025 Part 43-1992(Reaff: 2019)	BDL (DL:0.0005 mg/l)
Anionic Detergents (as MBAS)	IS 13428 - 2005 (Reaff:2019) (Annex K)	BDL (DL:0.01 mg/l)
Cyanide as CN	IS 3025 Part 27-1986 (Reaff: 2019)	BDL (DL:0.01 mg/l)
Barium as Ba	IS 3025 Part 44:1993 (Reaff:2019)	BDL(DL:0.05 mg/l)
Ammonia (as total ammonia-N)	IS 3025 Part 58:2006 (Reaff:2017)	BDL (DL:0.01 mg/l)
Sulphide as H ₂ S	IS 3025 Part 38:1989 (Reaff:2019)	BDL (DL:0.01 mg/l)
Molybdenum as Mo	IS 3025 Part 65:2014 (Reaff:2019)	BDL (DL:0.02 mg/l)
Total Arsenic as As	IS 3025 Part 34-1988 (Reaff: 2019)	BDL (DL:0.005 mg/l)
Total Suspended Solids	IS 3025 Part 29-1988 (Reaff: 2019)	BDL (DL:1.0 mg/l)
Discipline: Biological	Group: Water	
Total Coliform	APHA 23 rd Edn. 2017:9221B	136 MPN/100ml
Escherichia coli	APHA 23 rd Edn. 2017:9221F	< 1.8 MPN/100ml
Note : APHA - American Public Health Association, BDL - Below Detection Limit, DL - Detection Limit, MPN - Most Probable Number, < 1.8 MPN/100ml can be taken as "No Microbial Growth"		

End of Report


Reviewed & Authorized By
B. ARUNAN
Technical Manager
Authorized Signatory



For Chennai Mettex Lab Private Limited


Reviewed & Authorized By
P. KAVITHA
Technical Manager
Authorized Signatory



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ISSUED TO : Tvl. Murugappa Blue Metals

T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
16/5 (P), 16/7, Sirumailour Village, Uthiramerur Taluk,
Kancheepuram District.

T.C No : CML/23-24/18291

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

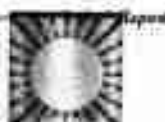
Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023

Lab No : 24016937

Sample Description : Soil - 1 - Core Zone
(as stated by customer)

S. No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff.2016)	8.53
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff : 2016)	590 µmhos/cm
03	Texture :		
	Clay	Gravimetric Method	30.8 %
	Sand		31.8 %
	Silt		37.4 %
04	Water Holding Capacity	By Gravimetric Method	45.3 %
05	Bulk Density	By Cylindrical Method	1.01 g/cm ³
06	Porosity	By Gravimetric Method	46.6 %
07	Calcium as Ca	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	143 mg/kg
08	Magnesium as Mg		61.7 mg/kg
09	Manganese as Mn		22 mg/kg
10	Zinc as Zn		1.17 mg/kg
11	Boron as B		1.8 mg/kg
12	Chloride as Cl	APHA 23 rd Edn 2019 4500 Cl B	92.4 mg/kg
13	Total Soluble Sulphate as SO ₄	IS 2720 Part 27 : 1977 (Reaff.2015)	0.010 %
14	Potassium as K	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	21.1 mg/kg
15	Total Phosphorus as P	IS 10158 : 1982 (Reaff. 2019)	2.6 mg/kg
16	Total Nitrogen as N	IS 14684 : 1999 (Reaff.2019)	374.2 mg/kg
17	Cadmium as Cd	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	BDL (DL : 1.0 mg/kg)
18	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
19	Copper as Cu		BDL (DL : 1.0 mg/kg)
20	Lead as Pb		0.6 mg/kg
21	Iron as Fe		1.91 mg/kg
22	Organic Matter	IS : 2720 Part 22: 1972 (Reaff. 2015)	1.74 %
23	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff. 2015)	1.01 %
24	Cation Exchange Capacity	USEPA 9080 - 1986	40.1 meq/100g of soil



For Chennai Mettex Lab Private Limited

[Signature]

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P. KAVITHA
Technical Manager

Authorized Signatory

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T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
16/5 (P), 16/7, Sirumailour Village, Uthiramerur Taluk,
Kancheepuram District.

T.C No : CML/23-24/16292

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023

Lab No : 24016938

Sample Description : Soil - 2 - Madhur
(as stated by customer)

S. No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff.2016)	8.77
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff : 2016)	473 µmhos/cm
03	Texture :		
	Clay	Gravimetric Method	31.2 %
	Sand		36.7 %
	Silt		32.1 %
04	Water Holding Capacity	By Gravimetric Method	45.3 %
05	Bulk Density	By Cylindrical Method	1.06 g/cm ³
06	Porosity	By Gravimetric Method	46.4 %
07	Calcium as Ca	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	170 mg/kg
08	Magnesium as Mg		110 mg/kg
09	Manganese as Mn		21.4 mg/kg
10	Zinc as Zn		1.02 mg/kg
11	Boron as B		0.64 mg/kg
12	Chloride as Cl	APHA 23 rd Edn 2019 4500 Cl B	176 mg/kg
13	Total Soluble Sulphate as SO ₄	IS 2720 Part 27 - 1977 (Reaff.2015)	0.018 %
14	Potassium as K	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	31.4 mg/kg
15	Total Phosphorus as P	IS 10158 - 1982 (Reaff. 2019)	1.6 mg/kg
16	Total Nitrogen as N	IS 14684 - 1999 (Reaff.2019)	510 mg/kg
17	Cadmium as Cd	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	BDL (DL : 1.0 mg/kg)
18	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
19	Copper as Cu		BDL (DL : 1.0 mg/kg)
20	Lead as Pb		0.19 mg/kg
21	Iron as Fe		2.64 mg/kg
22	Organic Matter	IS : 2720 Part 22: 1972 (Reaff. 2015)	2.17 %
23	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff. 2015)	1.26 %
24	Cation Exchange Capacity	USEPA 9060 - 1986	38.8 meq/100g of soil

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Technical Manager
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T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
16/5 (P), 16/7, Sirumailour Village, Uthiramerur Taluk,
Kancheepuram District.

T.C No : CML/23-24/18293

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023.

Lab No : 24016939

Sample Description : Soil - 3 - Pullampakkam
(as stated by customer)

S. No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff.2016)	8.03
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff : 2016)	423 µmhos/cm
03	Texture :		
	Clay	Gravimetric Method	35.4 %
	Sand		32.2 %
	Silt		32.4 %
04	Water Holding Capacity	By Gravimetric Method	46.5 %
05	Bulk Density	By Cylindrical Method	0.99 g/cm ³
06	Porosity	By Gravimetric Method	47.1 %
07	Calcium as Ca	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	144 mg/kg
08	Magnesium as Mg		60.1 mg/kg
09	Manganese as Mn		21 mg/kg
10	Zinc as Zn		3.8 mg/kg
11	Boron as B		0.8 mg/kg
12	Chloride as Cl	APHA 23 rd Edn 2019 4500 Cl B	50.1 mg/kg
13	Total Soluble Sulphate as SO ₄	IS 2720 Part 27 : 1977 (Reaff.2015)	0.0011 %
14	Potassium as K	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	44.5 mg/kg
15	Total Phosphorus as P	IS 10158 : 1982 (Reaff. 2019)	1.6 mg/kg
16	Total Nitrogen as N	IS 14884 : 1999 (Reaff.2019)	400 mg/kg
17	Cadmium as Cd	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	BDL (DL : 1.0 mg/kg)
18	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
19	Copper as Cu		BDL (DL : 1.0 mg/kg)
20	Lead as Pb		0.53 mg/kg
21	Iron as Fe		2.45 mg/kg
22	Organic Matter	IS : 2720 Part 22: 1972 (Reaff. 2015)	1.74 %
23	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff. 2015)	1.01 %
24	Cation Exchange Capacity	USEPA 9080 - 1986	40.1 meq/100g of soil.

End of Report

For Chennai Mettex Lab Private Limited



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Technical Manager
Authorised Signatory

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T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
16/5 (P), 16/7, Sirumailour Village, Uthiramerur Taluk,
Kancheepuram District.

T.C No : CML/23-24/18294

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023.

Lab No : 24016940

Sample Description : Soil - 4 - Kavanipakkam
(as stated by customer)

S. No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff.2016)	8.34
02	Conductivity @ 25°C	IS 14787 - 2000 (Reaff : 2016)	450 µmhos/cm
03	Texture :		
	Clay	Gravimetric Method	39.2 %
	Sand		35.5 %
	Silt		25.3 %
04	Water Holding Capacity	By Gravimetric Method	45.7 %
05	Bulk Density	By Cylindrical Method	1.09 g/cm ³
06	Porosity	By Gravimetric Method	47.5 %
07	Calcium as Ca	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	162 mg/kg
08	Magnesium as Mg		107.9 mg/kg
09	Manganese as Mn		26 mg/kg
10	Zinc as Zn		3.10 mg/kg
11	Boron as B		0.71 mg/kg
12	Chloride as Cl	APHA 23 rd Edn 2019 4500 Cl B	89.3 mg/kg
13	Total Soluble Sulphate as SO ₄	IS 2720 Part 27 : 1977 (Reaff.2015)	0.021 %
14	Potassium as K	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	35.5 mg/kg
15	Total Phosphorus as P	IS 10158 : 1982 (Reaff. 2019)	1.29 mg/kg
16	Total Nitrogen as N	IS 14884 : 1999 (Reaff.2019)	254.1 mg/kg
17	Cadmium as Cd	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	BDL (DL : 1.0 mg/kg)
18	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
19	Copper as Cu		BDL (DL : 1.0 mg/kg)
20	Lead as Pb		0.35 mg/kg
21	Iron as Fe		2.06 mg/kg
22	Organic Matter	IS : 2720 Part 22 : 1972 (Reaff. 2015)	3.20 %
23	Organic Carbon	IS : 2720 Part 22 : 1972 (Reaff. 2015)	1.86 %
24	Cation Exchange Capacity	USEPA 9080 - 1986	34.4 meq/100g of soil

End of Report

For Chennai Mettex Lab Private Limited



P. Kavitha
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P. KAVITHA
Technical Manager
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ISSUED TO : Tvl. Murugappa Blue Metals

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15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
16/5 (P), 16/7, Sirumailour Village, Uthiramerur Taluk,
Kancheepuram District.

T.C No : CML/23-24/18295

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023

Lab No : 24016941

Sample Description : Soil - 5 - Vayalakovur
(as stated by customer)

S. No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1987 (Reaff.2016)	8.86
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff. 2016)	376 µmhos/cm
03	Texture :		
	Clay	Gravimetric Method	32.1 %
	Sand		28.6 %
	Silt		39.3 %
04	Water Holding Capacity	By Gravimetric Method	44.9 %
05	Bulk Density	By Cylindrical Method	1.01 g/cm ³
06	Porosity	By Gravimetric Method	47.1 %
07	Calcium as Ca	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	142.6 mg/kg
08	Magnesium as Mg		90.8 mg/kg
09	Manganese as Mn		18.6 mg/kg
10	Zinc as Zn		4.1 mg/kg
11	Boron as B		2.5 mg/kg
12	Chloride as Cl	APHA 23 rd Edn 2019 4500 Cl B	155 mg/kg
13	Total Soluble Sulphate as SO ₄	IS 2720 Part 27 : 1977 (Reaff.2015)	0.005 %
14	Potassium as K	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	200 mg/kg
15	Total Phosphorus as P	IS 10158 : 1982 (Reaff. 2019)	1.5 mg/kg
16	Total Nitrogen as N	IS 14684 : 1999 (Reaff.2019)	480 mg/kg
17	Cadmium as Cd	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	BDL (DL : 1.0 mg/kg)
18	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
19	Copper as Cu		BDL (DL : 1.0 mg/kg)
20	Lead as Pb		0.21 mg/kg
21	Iron as Fe		1.96 mg/kg
22	Organic Matter	IS : 2720 Part 22: 1972 (Reaff. 2015)	2.10 %
23	Organic Carbon	IS : 2720 Part 22: 1972 (Reaff. 2015)	1.22 %
24	Cation Exchange Capacity	USEPA 9080 - 1986	44 meq/100g of soil

End of Report

For Chennai Mettex Lab Private Limited



P. Kavitha
Reviewed & Authorized By
P. KAVITHA
Technical Manager
Authorized Signatory

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CHENNAI METTEX LAB PRIVATE LIMITED[®]

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TEST REPORT

Page No.1 of 1

ISSUED TO : Tvl. Munugappa Blue Metals

T.C Date : 06.06.2023

15/1 (P), 15/2 (P), 15/3 (P), 15/4 (P), 15/5 (P), 15/6 (P),
 15/7, 15/8, 15/9, 15/10, 15/11, 15/12, 15/13A, 15/13B,
 15/14, 15/15A, 15/15B, 15/16, 16/1, 16/2, 16/3 (P), 16/4 (P),
 16/5 (P), 16/7, Sirumailour Village, Uthiramerur Taluk,
 Kancheepuram District.

T.C No : CML/23-24/18296

Date Of Receipt : 25.05.2023

Analysis Commenced On: 25.05.2023

Analysis Completed On : 06.06.2023

Cust. Ref : SRF Dated : 24.05.2023

Lab No : 24016942

Sample Description : Soil - 6 - Sirumailour
(as stated by customer)

S. No	Test Parameters	Protocols	Results
01	pH @ 25°C	IS 2720 Part 26 - 1967 (Reaff.2016)	7.68
02	Conductivity @ 25°C	IS 14767 - 2000 (Reaff : 2016)	673 µmhos/cm
03	Texture :		
	Clay	Gravimetric Method	34.5 %
	Sand		32.8 %
	Silt		32.7 %
04	Water Holding Capacity	By Gravimetric Method	46.6 %
05	Bulk Density	By Cylindrical Method	0.87 g/cm ³
06	Porosity	By Gravimetric Method	47.5 %
07	Calcium as Ca	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	168.7 mg/kg
08	Magnesium as Mg		72 mg/kg
09	Manganese as Mn		24.4 mg/kg
10	Zinc as Zn		1.8 mg/kg
11	Boron as B		0.19 mg/kg
12	Chloride as Cl	APHA 23 rd Edn 2019 4500 Cl B	103 mg/kg
13	Total Soluble Sulphate as SO ₄	IS 2720 Part 27 - 1977 (Reaff.2015)	0.009 %
14	Potassium as K	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	27.6 mg/kg
15	Total Phosphorus as P	IS 10158 - 1982 (Reaff. 2019)	2.9 mg/kg
16	Total Nitrogen as N	IS 14684 - 1999 (Reaff.2019)	410 mg/kg
17	Cadmium as Cd	USEPA 3050 B - 1996 & USEPA 6010 C - 2000	BDL (DL : 1.0 mg/kg)
18	Total Chromium as Cr		BDL (DL : 1.0 mg/kg)
19	Copper as Cu		BDL (DL : 1.0 mg/kg)
20	Lead as Pb		0.51 mg/kg
21	Iron as Fe		2.74 mg/kg
22	Organic Matter	IS - 2720 Part 22: 1972 (Reaff. 2015)	1.86 %
23	Organic Carbon	IS - 2720 Part 22: 1972 (Reaff. 2015)	1.08 %
24	Cation Exchange Capacity	USEPA 9080 - 1986	42.7 meq/100g of soil

End of Report

For Chennai Mettex Lab Private Limited



[Signature]
 Reviewed & Authorized By
 P. KAVITHA
 Technical Manager

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National Accreditation Board for Education and Training

Certificate of Accreditation

Geo Exploration & Mining Solutions, Salem

No. 17, Advaita Ashram Road, Fairlands, Salem – 636 004, Tamilnadu, India.

The organization is accredited as **Category-A** under the QCI-NABET Scheme for Accreditation of EIA Consultant Organization, Version 3: for preparing EIA-EMP reports in the following Sectors –

S.No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Mining of minerals opencast only	1	1 (a) (i)	A
2	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes	31	7 (c)	B
3	Building and construction projects	38	8(a)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in RAAC minutes dated Jan 06, 2023 and posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no QCI/NABET/ENV/ACO/23/2684 dated Feb 20, 2023. The accreditation needs to be renewed before the expiry date by Geo Exploration & Mining Solutions, Salem following due process of assessment.



Sr. Director, NABET
Dated: Feb 20, 2023

Certificate No.
NABET/EIA/2225/RA 0276

Valid up to
August 06, 2025

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