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BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

SOUTH ZONE, AT CHENNAI

Original Application No. 154 of 2021

IN THE MATTER OF

A. Balasubramaniam

.....Applicant

Vs.

Union of India & Ors.

.....Respondents

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**STATUS REPORT BY THE 8<sup>th</sup> RESPONDENT**

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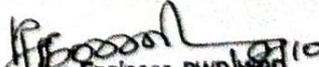
Chronology

- |  |            |
|--|------------|
| 1. Letter from Executive Engineer,<br>PWD Mining & Monitoring Division<br>to the District Collector, Thanjavur | 14/06/2018 |
| 2. Joint Inspection Report   | 23/06/2018 |
| 3. Letter from District Collector to<br>Executive Engineer, PWD.   | 04/07/2018 |
| 4. Mining Plan for Sand Quarry   | 10/07/2018 |
| 5. Environmental Clearance from<br>District Collector to Executive<br>Engineer, PWD                            | 06/08/2018 |
| 6. Paper Publication (Tamil)   | 23/08/2018 |
| 7. Paper Publication (English)   | (Undated)  |
| 8. TNPCB Consent to Operate Order  | 15/11/2018 |

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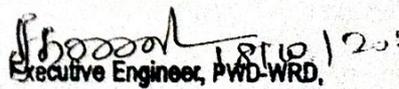
  
Executive Engineer, PWD-MRD,  
Mining and Monitoring Division, Thanjavur. 10/10/2021

9. Permission from the District Collector for Sand quarry 10/02/2020
10. Letter from Executive Engineer, PWD to District Collector confirming consent from DEIAA 11/03/2020
11. Writ Petition challenging the Impunged Order by the District Collector 23/09/2020
12. Photo taken before commencing sand quarry at survey no. 8 & 9 of Chinna Avudayar Kovil
13. Google map confirming distance between Thamarakottai mangrove forest and sand quarry
14. Photo confirming the sand quarry site at sf 8 & 9 at Chinna Avudayar Kovil

I, S.Kalyanasundaram s/o. Santhanam 59 year old, Executive Engineer, Mining and Monitoring Division, Thanjavur, having office at Old Judge Bungalow, near Circuit House, Thanjavur, do solemnly and sincerely states in this report as, I am well acquainted with the fact and circumstances of this matter on going through the documents available within the 8<sup>th</sup> respondent's office.

1. I submit that the 8<sup>th</sup> respondent applied to the 5<sup>th</sup> respondent on 14/6/2018 in order to carrying sand mining at SF No. 8 & 9 over an extent of 3 hectares in Agniyaru River at Chinna Avudayar Kovil village, Pattukkottai Taluk, Thanjavur District for manual sand mining and transport only by bullock carts. Agniyaru river is a drainage river and a seasonal river, water flows in this river only during rainy season.

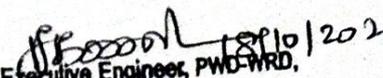
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Executive Engineer, PWD-WRD,  
Mining and Monitoring Division, Thanjavur.

- .....3.....
2. On the basis of the request made by the 8<sup>th</sup> respondent, the District Collector appointed a committee to inspect the sand quarry site. Members of committee were;
- (i) Revenue Divisional Officer, Pattukkottai
  - (ii) Assistant Director of Geology & Mining, Thanjavur
  - (iii) Assistant Executive Engineer Mining and Monitoring, Thanjavur; and
  - (iv) Assistant Executive Engineer TWAD Board, Thanjavur.
3. The committee inspected the sand quarry site on 23/6/2018 and submitted a report to the District Collector, Thanjavur. Based on this report, the District Collector made an order on 4/7/2018, that certain conditions has to be complied with, in order to obtain permission for carrying sand quarry at the said site. The terms were;
- (i) Approved mining plan; and
  - (ii) Environmental Clearance from DEIAA
4. The 8<sup>th</sup> respondent herein instructed Mr.A.Abdul Salam, Consultant to prepare a mining plan. The said plan was prepared on 10/7/2018 and was submitted to Assistant Director for Mines & Geology on 12/7/2018. On the same day, mining plan was approved by Assistant Director for Mines & Geology. Thereafter District Environmental Appraisal Committee held a meeting on 16/7/2018 and on 17/7/2018 DEIAA conducted meeting and minutes of the meeting were forwarded to the District Collector, Thanjavur.
5. On 6/8/2018 Environmental Clearance was granted by the District Collector, Thanjavur, and stipulated certain conditions, such as, to publish sand mining details in English and Tamil daily newspapers and to obtain consent to operate order from TNPCB under the Air Act 1987 and the Water Act 1974. The 8<sup>th</sup> respondent complied with the above said stipulations by publishing in a Tamil newspaper (23/8/2018) and English newspaper(undated) and obtained TNPCB consent to operate under the Air and Water Acts on 15/11/2018.
6. On 10/2/2020 the District Collector of Thanjavur granted permission for sand quarry at SF No. 8 & 9 at Chinna Avudayar Kovil, Pattukkottai Taluk, Thanjavur District.

7. A Writ Petition challenging the permission granted by the District Collector for sand quarrying at the above site was filed at the Madras High Court Madurai Bench as WP No. 13712 of 2020 and is currently pending at the Madurai Bench for final disposal.
8. The 8<sup>th</sup> respondent commenced sand quarrying at the above site on 14/3/2020 and the same was completed on 2/2/2021. From commencement of the quarry, around 1400 number of bullock carts, available near Pattukkottai, Orathanadu and Peravurani Taluks were identified and checked by the Revenue Department for online allocation of sand for the carts. A unique identify number was allotted for each bullock cart for the above said quarry. Each bullock cart is fixed with Radio Frequency Identity (RFID) and mapped with the details of the bullock carts such as the owner's name, address and their phone number with the respective unique identity number. SMS is being sent to the registered bullock carts owner's mobile number and the schedule bullock cart was only allowed entry into the quarry.
9. It is respectfully submitted that the sand quarried from the above site to the level of 53,614m<sup>3</sup> as against 54,000m<sup>3</sup>, which was the permitted level. The total revenue generated through this sand quarry to the public exchequer were to the tune of Rs.93,53,463.56. Only bullock carts were used for transportation of sand at this site on various trips to the total of 75,864.
10. The applicant claims in his application, that there is no fence at that quarry site. But the respondent has erected the fence at the quarry site. Please see the annexed photograph to confirm fencing who erected the quarrying site.
11. The applicant claims that the 8<sup>th</sup> respondent has carried out illegal sand mining at this site. The quarry is fitted with CCTV Cameras to monitor and prevent any illicit activities in the sand quarrying operations. The Government Centralized Control Room at Chennai monitoring the Sand Quarrying Operations, through live streaming from CCTV cameras. The CCTV cameras were useful to receive any complaints on illegalities occurred within the sand

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 Executive Engineer, PWD-WRD,  
 Mining and Monitoring Division, Thanjavur.

quarry. Such complaints were recorded and immediate action were taken to resolve the issues. From the above said facts and circumstances, that the applicant's claim is not true and baseless. Hence the application should be rejected with costs.

12. It is respectfully submitted that infact the original river course was diverted into the present one, which was done by the people who were encroached

13. Further, the applicant claims that Mangrove Forest is situated nearly 5 kms away from the sand quarry site. However, the google map, which is enclosed herewith this report, categorically shows that Thamarakottai Mangrove Forest is nearly 10 kms away from the sand quarry site. Hence the applicant's claim of Mangrove Vegetation is affected due to this sand mining is not true and baseless. Hence the application should be rejected with costs for this reason as well.

14. As mentioned above the total quantity of sand removed from this site is lower than the permitted level. Hence there was no uncontrolled mining was done at this quarry site as claimed by the applicant at SF 8 and 9, Chinna Avudayar Kovil village. Hence the applicant's application should be rejected with costs for this reason as well.

15. Mining plan for Chinna Avudayar Kovil sand quarry at SF No.8 & 9 was prepared by a qualified person, Mr. A.Abdul Salam, who certified as follows

This is to certify that, the provisions of Rule 12 of Draft Minor Mineral Conservation and Development Rules, 2010 & as per amendment rules 41 & 42 under Tamil Nadu Minor Mineral Concession Rules, 1959 have been observed in the preparation of Mining Plan for the grant of Sand quarry lease over an extent of 3.00.0 Ha of Government land (Agniyar River) in S.F.Nos. 8 & 9 of China Avudayar Kovil Village, Pattukottai Taluk, Thanjavur District and Tamilnadu State has been prepared for

**THE EXECUTIVE ENGINEER,**  
Public Works Department, (WRD),  
Mines and Monitoring Division,  
Thanjavur.

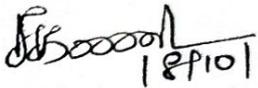
Whenever specific permission / exemptions / relaxations and approvals are required, the applicant will approach the concerned authorities of State and Central Governments for granting such permissions etc.,

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

16. Since, the mangrove vegetation is situated nearly 10 kms away from the sand quarry site, clearance from National Board for Wildlife was not required. Neither the Consultant who prepared the mining plan nor the District Collector insisted the 8<sup>th</sup> Respondent to obtain clearance from NBWL.
17. No trees were uprooted from this sand quarry at SF No. 8 & 9, when the sand was removed, in other words, when the quarry was in operation. It is important to note, due to cyclone GAJA trees were uprooted in 2018 invariably in this area.
18. Furthermore, nearly 300 acres of land, within the Agniyaru river boundary being under the occupation of the people living nearby villages namely Sendakottai, Chinna Avudayar Kovil and Thokkalikadu. These people are cultivating and planted cashew and casuarina trees without obtaining permission of the Water Resource Department . In other words the said nearly 300 acres of land which is situated within the water body, occupied illegally by the villagers. Hence the illegal occupations should be removed. The 8<sup>th</sup> respondent respectfully requests the Honourable Tribunal to direct the revenue officials at Pattukkottai (Revenue Divisional Office) to measure and demarcate the said nearly 300 acres of land.

19. SF No.11 is situated near from the sand quarry site of SF No.8 & 9. This SF No.11 is owned by the applicant. But he claims in his application, that he has no personal interest, the document of SF No.11 categorically shows that he is not a public interested person. "It is a basic principles, that whoever approaching the Tribunal, for a relief, is expected to be clean. In this case, the applicant approached the Tribunal, has no clean hands". From the above said facts, that the applicants claim is not true and baseless. Hence the application should be rejected with costs.

The above said facts were true to best of my knowledge.

Signature:   
Name: S. KALYANA SUNDARAM.  
Date: 18.10.2021

From  
Er. S.Ramamoorthy B.E.,  
Executive Engineer, PWD, WRD,(I/c)  
Mining and Monitoring Division,  
Thanjavur

To  
The District Collector,  
Thanjavur District,  
Thanjavur

Lr. No. F 1 / DO / Estimate / dated 14.09.2018

Sir,

Sub-- Thanjavur District Tiruvidaimarudur Taluk -New Proposal for Sand Quarrying - Precise  
Area -Submission- Reg

Ref - Arise

I herewith submit the following Sand Quarry Precise Area Proposal in china <sup>avudayar kovil.</sup> ~~pothu~~ village  
of Pattukottai taluk of Thanjavur District for further necessary action.

Sl.No.	Name of Quarry	Name of Village / Taluk	S.F.No.
1	China <del>pothu</del> avudayar kovil	China <del>pothu</del> avudayar kovil / Pattukottai.	9,12.

Enclosure

New Proposal Booklet - 1 Quarry with 2 copies

  
Executive Engineer, PWD, WRD,  
Mining and Monitoring Division,  
Thanjavur

## JOINT INSPECTION REPORT

The Executive Engineer, Public Works Department, Mining and Monitoring Division Thanjavur in letter No. F1 /DO /Estimate/ dated.14.06.2018 has forwarded the proposal to District collector for quarrying sand over an extent of 3.00.0 Hects of Government poramboke land in River Agniyar. The pit length of 300 meters and breath of 100 meters in S.F.No.9 & 8 of Chinna Avudaiyar kovil village in Pattukottai Taluk, Thanjavur District.

As instructed by the District Collector vide Rc.No.280/2018/dated 18.06.2018 the area jointly inspected on 23.06.2018. The joint inspection team headed by the Revenue Divisional Officer Pattukottai along with the, The Assistant Executive Engineer TWAD Board Thanajvur, The Assistant Executive Engineer Mining and Monitoring Division Thanjavur, The Assistant Director (i/c) (Mines) Thanjavur, and The village Administrative Officer of Chinna Avudayarkovil Village, Pattukottai Taluk was also present at the time of inspection.

Under the circumstance stated above, the area proposed for sand quarrying satisfied the restrictions made in rule 36 of Tamil Nadu Minor Mineral Concession Rules 1959. There is no existing sand quarry within a radial distance of 1KM from the area.

In view of the above, the above said sand quarry over an extent of 3.00.0 Hectares of Government poramboke land in River Aagniyar. The pit the length of 300 meters and the breath of 100 meters in S.F.No.9 & 8 of Chinna Avudaiyar kovil Village in Pattukottai Taluk, Thanjavur District may be considered for grant under rule 38A of Tamil Nadu Minor Mineral Concession Rules, 1959 subject to the following conditions:-

- i) No quarrying operation shall be carried out within 500 meters from the drinking water well of the local bodies of the proposed area.
- ii) The shoals/dunes above natural theoretical river bed slope only shall be quarried at the first instance.
- iii) The ultimate working depth shall be one metre from theoretical river bed level.

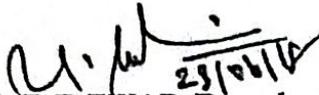
iv) Sand Quarrying shall not be carried out below ground water table under any circumstances.

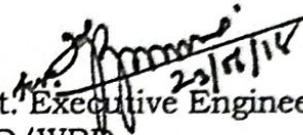
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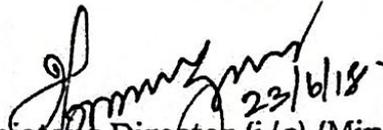
v) Stream Mining shall not be allowed.

vi) It shall be ensured that excavation of sand do not disturb or change the underlying soil characteristics of the river bed where quarrying is proposed to be carried out.

vii) Machinery used for the above said sand quarry instruction given by DEIAA .

  
23/6/18  
A.E.E TWAD Board,  
Thanjavur

  
23/6/18  
Asst. Executive Engineer,  
PWD/WRD  
Mining and Monitoring Division,  
Thanjavur

  
23/6/18  
Assistant Director (i/c) (Mines),  
Thanjavur

  
23/6/18  
Revenue Divisional Officer,  
Pattukottai

From  
Thiru A. Annadurai, I.A.S.,  
District Collector,  
Thanjavur.

To  
The Executive Engineer,  
Public Works Department, WRD,  
Mining and Monitoring Division,  
Thanjavur.



No. 28/Mines/2018, Date: 04.07.2018  
Sub: Mines and Minerals - Minor Mineral - Sand quarry -  
Thanjavur District - Pattukottai Taluk - Chinaavudayar Kovil  
Village - River Agniyar - in S.F.No.8 & 9 - Over an extent of  
3.00.0 Hectare - Permission requested by Executive Engineer,  
PWD, WRD, MM Division, Thanjavur -- Joint Inspection  
conducted - Recommended - Precise area communicated -  
Reg.

- Ref: 1. The Executive Engineer, Public Works Department,  
WRD (i/c), Mining and Monitoring Division, Thanjavur  
letter Rc.No.F1/DO/Estimate / Thanjavur Dated:  
14.06.2018.  
2. Joint Inspection Report dated 20.06.2018  
3. Other connected records.

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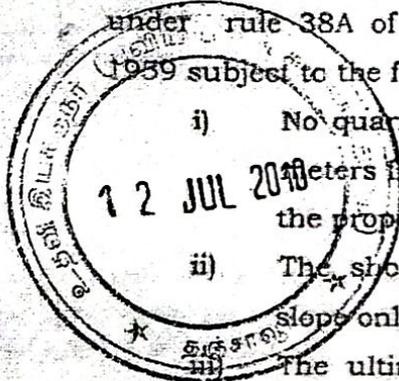
The Executive Engineer, Public Works Department, WRD, Mining and Monitoring Division, Thanjavur has submitted a proposal requesting sand quarry permission in S.F.No.8 & 9 over an extent of 3.00.0 hect : in Agniyar River of Chinaavudayar village, Pattukottai Taluk, Thanjavur District vide reference 1<sup>st</sup> cited.

2) In connection with the above, a Joint Inspection was carried out on 23.06.2018. The team consisting of the Revenue Divisional Officer, Pattukottai, Assistant Director(i/c), Geology and Mining, Thanjavur, Assistant Executive Engineer, PWD., Mining and Monitoring Division, Thanjavur, along with the Assistant Executive Engineer, IWAD, Thanjavur and submitted their joint inspection report vide reference 2<sup>nd</sup> cited.

3) Under the circumstance stated above, the area proposed for sand quarrying satisfied the restrictions made in rule 36 of Tamil Nadu Minor Mineral Concession Rules 1959. There is no existing sand quarry within a radial distance of 1KM from the area.

4) In view of the above, the above said sand quarry over an extent of 3.00.0 Hectares of Government poramboke land in River Agniyar. The pit the length of 300 meters and the breath of 100 meters in S.F.No.8 & 9 of Chinna Avudaiyar kovil Village in

Pattukottai Taluk, Thanjavur District may be considered for grant under rule 38A of Tamil Nadu Minor Mineral Concession Rules, 1959 subject to the following conditions:-



- i) No quarrying operation shall be carried out within 500 meters from the drinking water well of the local bodies of the proposed area.
- ii) The shoals/dunes above natural theoretical river bed slope only shall be quarried at the first instance.
- iii) The ultimate working depth shall be one meter from theoretical river bed level.
- iv) Sand Quarrying shall not be carried out below ground water table under any circumstances.
- v) Stream Mining shall not be allowed.
- vi) It shall be ensured that excavation of sand do not disturb or change the underlying soil characteristics of the river bed where quarrying is proposed to be carried out.

Further, it is ascertained that, during inspection, no objection was raised from the Public for the grant of sand quarrying in the proposed area.

4) Finally, they have recommended for the grant of sand quarry permission in S.F.No.8 & 9 over an extent of 3.00.0 hecets in Agniyar River of China avudayar kovil village, Pattukottai Taluk, Thanjavur District to the Executive Engineer, Public Works Department, WRD (i/c), Mining and Monitoring Division, Thanjavur.

5) Based on the above recommendations of the Joint Inspection Officials and in order to Bullock cart the need of sand for the construction purposes of the public and the Government Organisations, opening of a new sand quarry in the proposed area is an essential one.

6) As per Rules 41 & 42 of TNMMCR 1959 amended vide G.O.(Ms) No.79 Industries (MMC1) Department dt.06.04.2015, "Mining Plan and Environmental Clearance are pre-requisite to the grant of quarry lease for Minor Minerals like sand.

7) Therefore, in view of the above, an extent of 3.00.0 hecets in Agniyar River S.F.No.8 & 9 Chinaavudayer Kovil village, Pattukottai Taluk, Thanjavur District is considered as "Precise area" for the grant of sand quarry permission for a period of three years, on production of the Approved Mining Plan and Environmental Clearance obtain from the

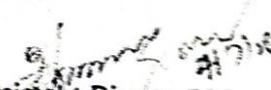
District Level Environmental Impact Assessment Authority, Thanjavur  
for grant of sand quarry permission, subject to the following conditions.

- i) Quarrying of sand should be carried out 50m away from the bank of the river.
- ii) Should provide permanent bench mark which shows the level of the river bed in the subject survey number.
- iii) Boundary stones should be laid all along the demarcated area as permitted.
- iv) Quarrying of sand should be down only in the mid - stream.
- v) River course should not be disturbed or changed due to quarrying of sand.
- vi) Should not cause any hindrance to the public while quarrying of sand in the river bed.
- vii) The conditions specified in Tamil Nadu Minor Mineral Concession Rules 1959, should be strictly adhered during the course of quarrying of sand.

8) Hence, the the Executive Engineer, Public Works, Department, WRD (i/c), Mining and Monitoring Division, Thanjavur is requested to produce the draft Mining Plan before the Assistant Director, (G&M), Thanjavur and prepared by a Recognized Qualified Person for approval and forwarding the same to the District Level Environmental Impact Assessment Authority, Thanjavur for getting Environmental Clearance, within a period of 3 months from the date of receipt of this precise area communication.

Sd/-A.Annadurai  
District Collector,  
Thanjavur.

//Forwarded/By Order//

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

  
4.7.18



A. ABDUL SALAM, M.Sc.,  
RECOGNISED QUALIFIED PERSON  
Reg. No: RQP / MAS / 226 / 2011 / A

# MINING PLAN FOR CHINA AVUDAYAR KOVIL SAND QUARRY



(Prepared under Rules, amendment 38-A Tamilnadu Minor Mineral Concession Rules, 1959  
and Draft Minor Mineral Conservation and Development Rules, 2018)

Period: (Three) 3 Years Only

IN

LOCATION OF THE QUARRY LEASE APPLIED AREA

EXTENT : 3.00.0 Ha  
S.F.Nos : 8 & 9  
VILLAGE : CHINA AVUDAYAR KOVIL  
TALUK : PATTUKOTTAI  
DISTRICT : THANJAVUR  
STATE : TAMIL NADU

FOR

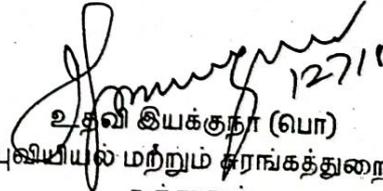
APPLICANT

THE EXECUTIVE ENGINEER,  
PUBLIC WORKS DEPARTMENT, (WRD),  
MINES AND MONITORING DIVISION,  
THANJAVUR.

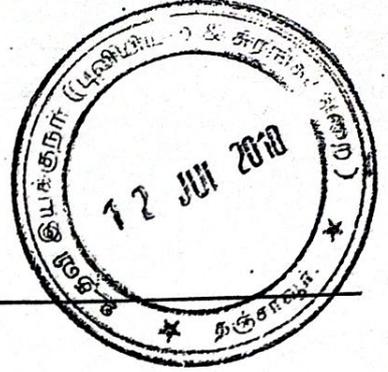
PREPARED BY

A.ABDUL SALAM, M.Sc.,  
Recognised Qualified Person  
Reg.No.RQP/MAS/226/2011/A  
SAI RAM MINING & GEOLOGY CONSULTANCY  
Regd.Office:4/193.A,Gokula Krishna Street,  
Advaidha Ashramam Road , Alagapuram,  
Salem-636004. Ph: 0427-4266767 | Cell- 9994466685

This Mining Plan is Approved  
Subject to the Conditions / Stipulation &  
Incorporated in the Mining Plan Approval  
Letter No. 240 / 2018 / dt / 112718  
Office of the A.D. Geology & Mining, Thanjavur

  
உதவி இயக்குநர் (பொ)  
புவியியல் மற்றும் சுரங்கத்துறை  
தஞ்சாவூர்.

**THE EXECUTIVE ENGINEER,**  
Public Works Department, (WRD),  
Mines and Monitoring Division,  
Thanjavur.



**CONSENT LETTER FROM THE APPLICANT**

The Mining Plan in respect of Sand quarry over an extent of 3.00.0 Ha of Government land (Agniyar River) in S.F.Nos. 8 & 9 of China Avudayar Kovil Village, Pattukottai Taluk, Thanjavur District, Tamil Nadu State has been prepared by Thiru. A.Abdul Salam, M.Sc., Recognised Qualified Person, Registration Number RQP/MAS/226/2011/A

I request the Assistant Director, Department of Geology and Mining, Thanjavur District to make further correspondence regarding of the Mining Plan with the said Recognised Qualified Person on this following address.

**A.ABDUL SALAM, M.Sc.,**  
**Recognised Qualified Person**  
**Reg.No.RQP/MAS/226/2011/A**  
SAI RAM MINING & GEOLOGY CONSULTANCY  
Regd.Office:4/193.A,Gokula Krishna Street,  
Advaidha Ashramam Road,  
Alagapuram, Salem-636004.  
Ph: 0427-4266767 | Cell- 9994466685  
Email:srmgc.salem@gmail.com

I hereby undertake that all modifications so made in the Mining Plan by the Recognised Qualified Person may be deemed to have been made with my knowledge and consent and shall be acceptable to me and binding on me in all respects.

Signature of the Applicant

Place : Thanjavur

Date : 12.7.18

THE EXECUTIVE ENGINEER,  
Public Works Department, (WRD),  
Mines and Monitoring Division,  
Thanjavur.



**DECLARATION**

The Mining Plan in respect of Sand quarry over an extent of 3.00.0 Ha of Government land (Agniyar River) in S.F.Nos. 8 & 9 of China Avudayar Kovil Village, Pattukottai Taluk, Thanjavur District, TamilNadu State has been prepared with my consultation and I have understood the contents and agree to implement the same in accordance with the Mining Laws.

Signature of the Applicant

A handwritten signature in black ink, appearing to be "M. S. S. S.", written over a horizontal line.

Place : Thanjavur

Date: 10.7.18

**A.ABDUL SALAM , M.Sc.,**  
**Recognised Qualified Person**  
Reg.No.RQP/MAS/226/2011/A  
**SAI RAM MINING & GEOLOGY CONSULTANCY**  
Regd.Office:4/193.A, Gokula Krishna Street,  
Advaidha Ashramam Road , Alagapuram,  
Salem-636004.



**CERTIFICATE**

This is to certify that, the provisions of Rule 12 of Draft Minor Mineral Conservation and Development Rules, 2010 & as per amendment rules 41 & 42 under Tamil Nadu Minor Mineral Concession Rules, 1959 have been observed in the preparation of Mining Plan for the grant of **Sand quarry** lease over an extent of 3.00.0 Ha of Government land (Agniyar River) in S.F.Nos. 8 & 9 of China Avudayar Kovil Village, Pattukottai Taluk, Thanjavur District and Tamilnadu State has been prepared for

**THE EXECUTIVE ENGINEER,**  
Public Works Department, (WRD),  
Mines and Monitoring Division,  
Thanjavur.

Whenever specific permission / exemptions / relaxations and approvals are required, the applicant will approach the concerned authorities of State and Central Governments for granting such permissions etc.,

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

Certified

A handwritten signature in black ink, appearing to read "A. Abdul Salam".

Signature of Recognised Qualified Person

**A. ABDUL SALAM, M.Sc.,**  
**RECOGNISED QUALIFIED PERSON**  
Reg. No: RQP / MAS / 226 / 2011 / A

Place: Salem

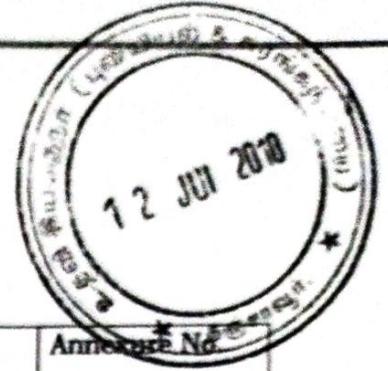
Date:

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**MINING PLAN FOR SAND OVER AN EXTENT OF 3.00 HECTARES OF  
GOVERNMENT LAND (AGNIYAR RIVER) IN S.F.Nos. 8 & 9 OF CHINA  
AVUDAYAR KOVIL VILLAGE, PATTUKOTTAI TALUK, THANJAVUR DISTRICT  
TAMIL NADU STATE.**

**Period: (Three) 3 Years**

**(Prepared under rule 12 of Minor Mineral Conservation and Development Rules, 2010 &  
as per amendment rule 41 & 42 under Tamil Nadu Minor Mineral Concession Rules, 1959)**

**1.0 INTRODUCTION:**

1. The present Mining plan & Environmental Management plan is prepared for The Executive Engineer, Public Works Department, (WRD), Mines and Monitoring Division, Thanjavur.
2. Tamilnadu Public works department establish periodical maintenance including desalting of Sand shoals of the river is carried out to maintain the functional efficiency and carrying capacity of the river, desilting was never carried out flowing problem caused in the riverbed top floor level increased and decrease the river carrying capacity as result River flow direction diverted leads to loss many properties and lives. To prevent above problem is desilting of shoals of Agniyar River to remove, it is not economical viable alternately option is to mine sand and remove the Sand shoals is reasonable.
3. As per G.O No. 46/industries (MMCI) Department, dated 25.09.2002, committee had been constituted to conduct a survey of rivers and river beds in the state with reference to sand quarry. The committee concluded that, Even though several rules on sand mining exist, illegal quarrying of sand is out of control. Authority for regulating sand mining is vested with different organization such as, State Geology and Mining Department, Revenue Department and Public Works Department. Hence, implementation and monitoring of rules and regulation regarding sand quarrying are not effective. This important task of sand mining therefore, should be entrusted to a Single Agency.
4. The Government issued an order vide G.O.Ms.No. 95, industries (MMCI) Department, Dt.01.10.2003 to operate sand quarries in Tamil Nadu by Public Works department. Accordingly, sand quarrying operations are being carried out from October 2003 in Districts of the Tamil Nadu. Hence this project of

removing of sand for maintains the functional efficiency of Agniyar River and its carrying capacity.

5. The Government issued the G.O. (D) No. 67/Industries (MMG-1) Department dated 11.03.2011, the District Collectors have been authorized to grant the permission for usage of Machinaries in sand quarry operation except Palar and Tamirabarani Rivers.

6. The applicant proposed to quarry Sand in Government land (Agniyar River) survey field Nos. 8 & 9, in China Avudayar Kovil Village of Pattukottai Taluk, Thanjavur District for a period of (Three) 3 years only. The excavated Sand is used for domestic construction purpose and other infrastructure development work in and around the district.

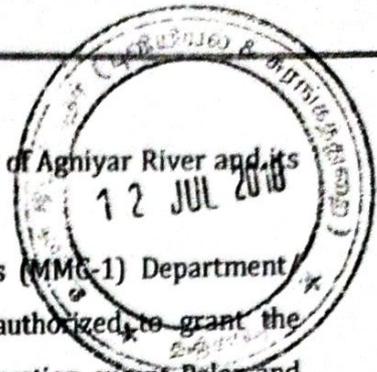
7. The application was processed by the District Collector Thanjavur and passed an order vide Rc.No.280/Mines/20108 Dated: 04.07.2018 to obtain an approved Mining Plan and Environmental Clearance from the District Level Environment Impact Assessment Authority (DEIAA), Thanjavur District.

8. Geological Resources is estimated at 1,55,278m<sup>3</sup> and Mineable Reserves is estimated at 65,278m<sup>3</sup> of Sand as indicated in the precise area letter and relevant mining laws in force.

9. The proposed quantity of reserves estimated at 54,000m<sup>3</sup> of Sand Shoals only for the period of (Three) 3 years only.

10. Environmental parameters,

- The area does not attract the Forest Conservation Act, 1980 as there is no forest around 10 Km radius.
- There is no Interstate boundary around 10 Km Radius.
- There is no wild life animal sanctuary within 10 Km radius form the project site area under the Wildlife (Protection) Act, 1972.
- Therefore the project seeks clearance only from State Level Environmental Impact Assessment Authority (SEIAA), under B2 Category.

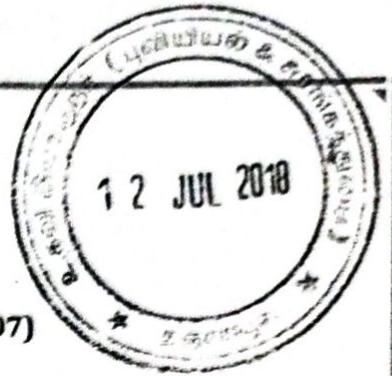




**2.0 EXECUTIVE SUMMARY:**

The area applied for lease is a Government land (Agniyar River) in Survey Field No. 623(Part) in China Avudayar Kovil Village, Pattukottai Taluk, Thanjavur District.

- Village Panchayat = China Avudayar Kovil
- Panchayat Union = Pattukottai
- The proposed total Mineable reserves = 54,000m<sup>3</sup> of Sand shoals.
  
- The proposed quantity of Recoverable reserves (level of production) to be mined = 54,000m<sup>3</sup> of Sand shoals for a period of (Three) 3 years only.
- Total extent of the area = 3.00.0Ha
- Proposed Period of mining = (Three) 3 years only.
- Height Of Sand Shoals = 2.175m (Max) and Proposed 1.80m (Avg) above the theoretical river bed level
  
- ❖ Method of mining (level of mechanization) :
  - Opencast Manual method is proposed without Drilling and Blasting.
- ❖ Type of machineries used in the quarry:
  - Machineries like Bullock cart only.
  
- ❖ No trees are uprooted due to mining operations:
  
- ❖ The area applied for lease is about 3.00.0 Ha which is bounded by four corners, the Corners are designated as 1 to 4 clock wise from western border and the Co - ordinates for the boundaries are listed below



**China Avudayar Kovil Village (Toposheet No 58 N/07)**

**Table No : 1**

Boundaries/Corners	Co-Ordinates		Distance between Boundaries/ Corners
	Latitude	Longitude	
1	10°20'24.31"N	79°20'00.60"E	1-2 = 100.0m
2	10°20'33.86"N	79°20'02.51"E	2-3 = 300.0m
3	10°20'33.25"N	79°20'05.71"E	3-4 = 275.0m
4	10°20'23.70"N	79°20'03.82"E	4-5 = 50.0m

- ❖ The area applied for lease is 10Km away from the Interstate boundary, Protected area, under Wild Life Protection Act. 1972 critically polluted areas as identified by CPCB and Notified Eco Sensitive Areas.
- ❖ Around 26 employees are proposed to be deployed for the quarrying Operation.
- ❖ Total Cost of the project      Rs. 77,85,000/-



**PART: A**

**3.0 GENERAL INFORMATION:**

Name of the Applicant	The Executive Engineer,
Address of the Applicant with phone No and e-mail id if any	Public Works Department, (WRD), Mines and Monitoring Division, Thanjavur. Cell No: Email :
Status of the Applicant	Individual (The Applicant is an Executive Engineer, on behalf of Public Works Department, Government of Tamil Nadu)
Mineral Which the applicant intends to mine	River Sand Only

Precise area communication letter No	Precise area communication letter received from District Collector, Thanjavur letter vide Rc.No. No.280/Mines/2018, dated: 04.07.2018
Period of permission / lease granted	The District Collector consider for grant of lease period of (Three) 3 Years only.
Name and Address of the RQP preparing Mining Plan	<b>A.ABDUL SALAM, M.Sc.,</b> Recognised Qualified Person, Reg.No. RQP/MAS/226/2011/A, <b>SAI RAM MINING &amp; GEOLOGY CONSULTANCY</b> Regd.Office:4/193.A,Gokula Krishna Street, Advaidha Ashramam Road , Alagapuram, Salem-636004. Tamilnadu State.  Ph: 0427-4266767   Cell- 9994466685 Email:srmgc.salem@gmail.com



#### 4.0 LOCATION:

##### a). Details of the area (with Location Map):

- The quarry lease applied area falls in the Agniyar River, China Avudayar Kovil Village, Pattukottai Taluk & Thanjavur District.
- Please refer the location map enclosed as Plate No.I.

Table No: 2

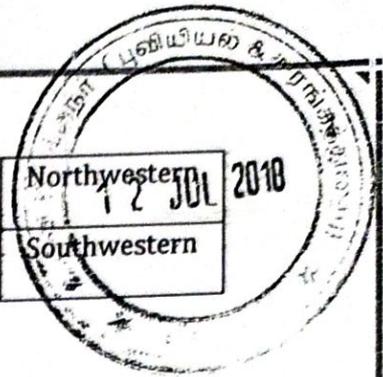
District	Thanjavur
Taluk	Pattukottai
Village	China Avudayar Kovil
Survey Numbers	8 & 9
Extent(in Hectares)	3.00.0Ha

##### Details of nearby Infrastructures

Table No: 3

S. No	Description	Place	Distance (km)	Direction
1	Bus stand	Poovanam	3.0	Northwestern
2	Post Office	Pattukottai	10.0	Northwestern
3	Government School	Pattukottai	10.0	Northwestern
4	Primary Health Centre	Pattukottai	10.0	Northwestern
5	Ambulance	Pattukottai	10.0	Northwestern
6	Police Station	Pattukottai	10.0	Northwestern
7	Fire service	Pattukottai	10.0	Northwestern
8	Railway Station	Pattukottai	8.5	Northwestern

9	Airport	Tiruchirappalli	82.0	Northwestern
10	Seaport	Thoothukudi	217.0	Southwestern



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

- It is a Government (River Poramboke) Land.

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

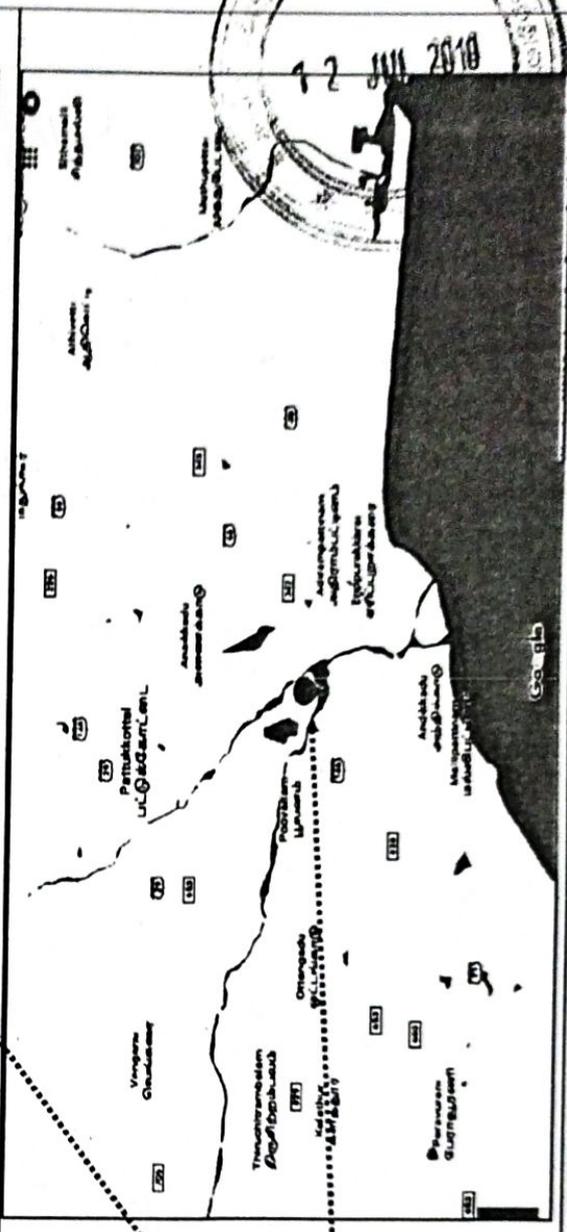
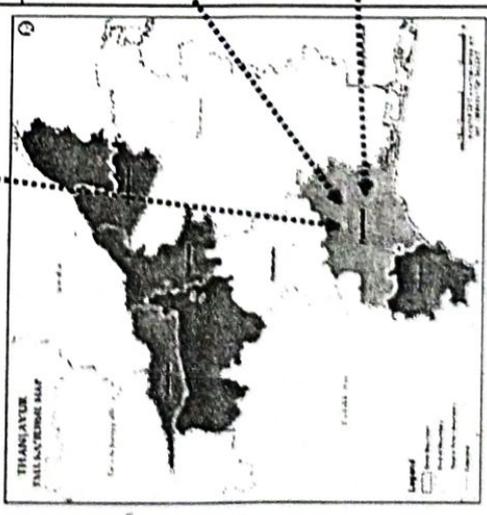
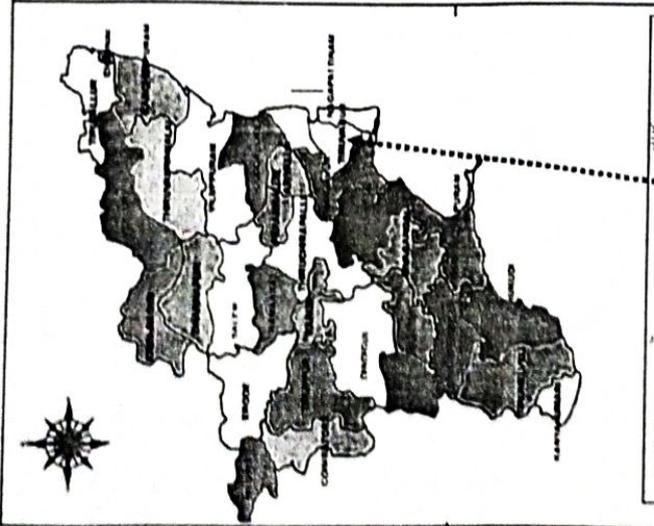
- It is a Government Land maintained by Public Works Department, Thanjavur District

**Toposheet No. with latitude and longitude**

Table No: 4

Topo Sheet No	58-N/07
Latitude	10°20'23"N to 10°20'33"N
Longitude	79°20'00"E to 79°20'05"E

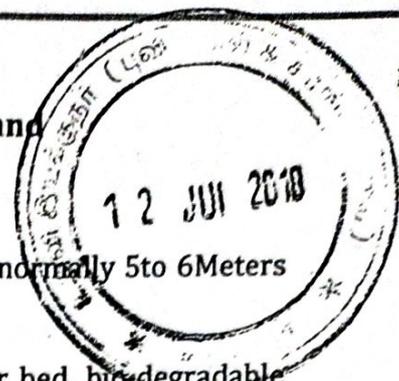
# LOCATION OF THE LEASE APPLIED AREA



e). Existence of Public road / Railway line, if any nearby and

**approximate distance:**

- To approach the lease area from the river bank, which is normally 5 to 6 Meters Height from the river bed, it is necessary to lay a ramp.
- From this ramp, for the movement of Trucks on the river bed, bio-degradable pathway with sand and bio-degradable materials (Sugar Cane leaves etc.,) in a grid pattern is necessary to maintain a uniform level from the river bed to approach the sand shoals.
- On an average the pathways are 2 to 3 Meters height from the existing river bed.
- Since, the level difference between river bed and height of the Bullock Cart is nearly 4 Meters; deployment of labourers is not feasible from the river bed.
- There is an existing road running parallel to the banks of the river which leads to China Poovanam villages on western side of the area.
- The Nearest Railway station is Muttarasanallur which connects the line between Pattukottai – Adirampattinam about 2.5 km on the Northeastern side of the area.



**5.0 GEOLOGY AND MINERAL RESERVES:**

a). Brief description of the Topography and General Geology of the area

**(With plans):**

- The lease applied area is Agniyar River exhibits slightly undulated topography covered with Sand Shoals and Sand which is formed by the continuous mechanical action of river erosion of weathered particles transported and deposited.
- The altitude of the area is 6.625m (Maximum) from MSL; the slope of the area is gentle towards Eastern side.
- Please refer the Topography, Geological plan and sections (Plate No -IV& IV-A).

**b). Details of exploration already carried out if any:**

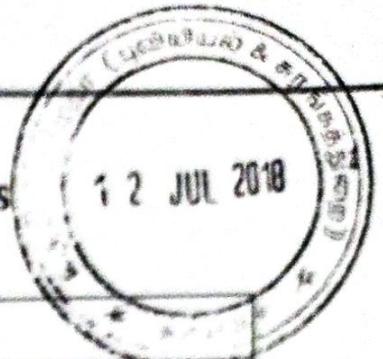
- No exploration was carried out.
- The Sand formation is clearly visible right from the surface.



**c). Estimation of Reserves:**

- The Geological plans demarcating the commercially viable Sand body have been prepared in 1:2000 Scale (Plate No. IV & IV-A).
- The River Levels (RL) taken for the Reserve calculation, Totally 8 sections have been drawn one along the Length wise of the area (X-Y) and another 7 sections are drawn (A-A'), (B-B'), (C-C'), (D-D'), (E-E'), (F-F') & (G-G') sections along the width wise of the area to cover the area consider for lease in the scale of Horizontal: 1:2000 & Vertical: 1:200. Please refer (Plate No. IV & IV-A)
- The cross sectional area for the proved depth persistence of 4m has been worked out for the section.
- The cross sectional area multiplied by its length of influence on the longer axis gives the volume (in-situ) in the cross sectional area.
- The sum total of the in-situ reserves available within the individual cross sectional area gives the geological reserves of the lease applied area.
- The Geological Resources, Mineable Reserves are given only in terms of Cubic Meter only.
- Please refer Geological Plan and Section shown in (Plate No. VI & VI-A)
- Geological Resources with Geological sections on a scale of 1:2000.
- The Geological Resources calculated up to a depth of 3.0m below the theoretical river bed level including Sand shoals. The Resources are given below.
- Geological Resources are estimated in Area calculation method.

**GEOLOGICAL RESOURCES OF SAND SHOALS  
(ABOVE THE NATURAL RIVER BED LEVEL)**



<b>RESERVE ESTIMATION OF SHOALS</b>					
<b>S.No</b>	<b>CS@</b>	<b>Area (m<sup>2</sup>)</b>	<b>Mean Area (m<sup>2</sup>)</b>	<b>Distance (m)</b>	<b>Quantity in M<sup>3</sup></b>
1	0m	54.90			
2	50m	173.85	114.375	50	5718.75
3	100m	188.25	181.050	50	9052.50
4	150m	243.00	215.625	50	10781.25
5	200m	296.40	269.700	50	13485.00
6	250m	262.05	279.225	50	13961.25
7	300m	229.10	245.575	50	12278.75
<b>GRAND TOTAL</b>					<b>65277.50</b>
<b>GRAND TOTAL (Round off)</b>					<b>65,278</b>

Table No: 5

**GEOLOGICAL RESOURCES OF SAND  
(BELOW THE THEORETICAL RIVER BED LEVEL)**

Table No: 6

<b>Area in (Ha)</b>	<b>Depth in (m)</b>	<b>Volume in m<sup>3</sup> (Area X Depth)</b>	<b>Geological Resources of Sand in m<sup>3</sup></b>
3.00.00	3.0	90,000	90,000
<b>Total</b>			<b>90,000</b>

- Geological Resources Of Sand Shoals = 65,278m<sup>3</sup>
- Maximum Height of Sand Shoals = 65,278m<sup>3</sup> / 30,000m<sup>2</sup>  
= 2.175m (Max)



- **Average Height of Sand Shoals** =  $54,000\text{m}^3 / 30,000\text{m}^2$   
= **1.80m (Avg)**
- **Geological Resources of Sand below**  
the theoretical river bed level =  $90,000\text{m}^3$
- **Total Geological Resources Of**  
**Sand Including Shoals** =  $1,55,278\text{m}^3$

**RECOVERABLE RESERVES:**

- There is no wastages is anticipated in the quarrying operation, Geological Resources is calculated as Mineable Reserves.
- The Mineable reserve is restricted up to a depth 1.0m below theoretical river bed level.
- Mineable Resources are estimated in area calculation method



**MINEABLE RESERVES**  
**MINEABLE RESERVES OF SAND SHOALS**  
**(ABOVE THE NATURAL RIVER BED LEVEL)**

Table : 7

<b>RESERVE ESTIMATION OF SHOALS</b>					
<b>S.No</b>	<b>CS@</b>	<b>Area (m<sup>2</sup>)</b>	<b>Mean Area (m<sup>2</sup>)</b>	<b>Distance (m)</b>	<b>Quantity in M<sup>3</sup></b>
1	0m	54.90			
2	50m	173.85	114.375	50	5718.75
3	100m	188.25	181.050	50	9052.50
4	150m	243.00	215.625	50	10781.25
5	200m	296.40	269.700	50	13485.00
6	250m	262.05	279.225	50	13961.25
7	300m	229.10	245.575	50	12278.75
<b>GRAND TOTAL</b>					<b>65277.50</b>
<b>GRAND TOTAL (Round off)</b>					<b>65,278</b>

**MINEABLE RESERVES OF SAND**  
**(BELOW THE THEORETICAL RIVER BED LEVEL)**

Table: 8

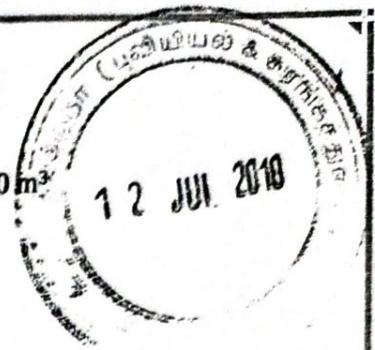
<b>Area in (Ha)</b>	<b>Depth in (m) Above theatrical bed level</b>	<b>Volume in m<sup>3</sup> (Area X Depth)</b>	<b>Mineable Resources of Sand Shoals in m<sup>3</sup></b>
3.00.00	1.80	54,000	54,000
<b>Total</b>			<b>54,000</b>

- Mineable Reserves Of Sand Shoals = 65,278m<sup>3</sup>
- Production Reserves of Sand above the

Theoretical River bed level

(L300m x W100m X D1.80m Above theatrical bed level) = 54,000 m<sup>3</sup>

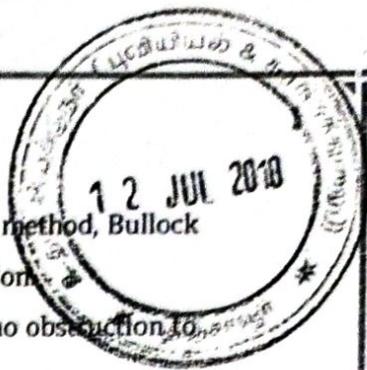
- Total Production Reserves of sand Shoals Only = 54,000m<sup>3</sup>
- (Please refer Plate No- VI,VI-A & Annexure-V)



## 6.0 MINING

### 1). Method of Mining (Opencast / underground):

- The soil is being removed by using Manual Method.
- The sand shoals either continuously or intermittently in the length and breadth of the river, the sand shoals on the river bed causes huge ups and downs along the length and breadth of the river.
- Hence, by deploying the manual Labours to directly load the sand from river bed into the Bullock Cart, which is length 4.29 m, width 1.49 m and height 0.85 m is not feasible one.
- The Deployment of earth moving Machineries in the river bed is absolutely necessary for considering the above ground reality.
- Person operating quarries possess good knowledge of the Theoretical river bed level. *No drilling or blasting is proposed for this type of sand quarrying, it is a conventional eco-friendly quarrying operation.*
- In this process temporary labours from neighboring villages are engaged for the purpose of maintaining the approaches.
- Regulating the vehicle movements, issuing of permits etc., to regulate the quarry operation in a scientific and systematic manner.
- At sand quarrying site judicial numbers and/or Bullock card labours of Manual method are used to load the sand directly into consumer vehicles (Bullock Cart).
- After that the loaded vehicles are allowed to go out of the site.



**II). Mode of working (mechanized, semi mechanized, manual):**

- The quarrying operation is being carried out in opencast manual method, Bullock card labours are do manual loading work for this quarrying operation.
- Mining activities is being carried out in a manner so that there is no obstruction to the movement of water flow.
- The sand is being loaded directly to the Bullock carts for transportation to the Pwd stockyard point area only.
- Initially to approach the quarrying site a temporary road was formed by using sand mixed with Bio-degradable materials and formed a grit around the sand quarrying site to move the Bullock cart easily.
- During forming the approach road and grit, necessary temporary pipes provided wherever necessary for free flow of water in to downstream.
- Roads in the lease area for the movement of loaded Bullock cart will not have slopes more than 1 in 20.
- However, movement of Bullock cart after mineral loading will be towards both sides through approach roads connecting to tar roads.
- Lease area already has approach roads, well connected to main highways.
- No processing of mineral is being done within the lease area.

**III). Proposed Bench Height & Width:**

- The bench Height is 1.0 m vertical bench the Width of 500m.



**IV). 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.):**

- There is no Overburden, the Sand shoals is to exploit only to a depth of 1.80 m (Avg) above theoretical river bed level.
- The applicant proposed to excavate up to a depth of 1.80m (Avg) above theoretical river bed level for a period of (Three) 3 years only.

**Year wise Production Table**

Table No: 10

Year	Pit No.	Over burden	Rom ore/ Mineral m <sup>3</sup>	Saleable ore / Mineral m <sup>3</sup>	Sub grade ore / mineral	Mineral rejects	Ore to overburden ratio
1	I	Nil	18,000	18,000	Nil	Nil	Nil
2	I	Nil	18,000	18,000	Nil	Nil	Nil
2	I	Nil	18,000	18,000	Nil	Nil	Nil
<b>Grand Total</b>			<b>54,000</b>	<b>54,000</b>	Nil	Nil	Nil

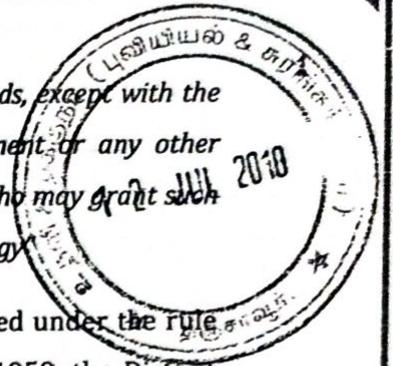
The applicant has obtained permission to quarry Sand for a period of (Three) 3 years only.

**V). Machineries to be used:**

The following G.O's was amended to quarrying sand by using machineries.

- As per the G.O.MS.NO.19 Industries (MMC 1) Department dated 19.04.2014 amended Rule 36-A of Tamilnadu Minor Mineral Concession Rules, 1959.
- In the said Rules, in Rule 36-A, for Sub- rule (6) the following sub - rule substituted

*"(6) No machinery shall be used for quarrying sand from river beds, except with the permission of the Secretary to Government, Industries Department or any other authority or Officer, as may be authorized by him in this behalf, who may grant such permission if use of such machinery will not be detrimental to ecology"*



- The Government have decided that as per the powers conferred under the rule 36-A (6) of the Tamilnadu Minor Mineral Concession Rules, 1959, the District Collectors are permitted to restricted and judicious use of minimum number of poclains, ie., not more than two poclains in each of the quarry sites in the state (other than Palar and Tamirabarani Rivers).
- Hence permission may be accorded to the Executive Engineer, PWD/WRD Department, MMD, Thanjavur to use Minimum number is restricted to four poclains for the above sand quarry.
- In G.O.MS No.110, Industries dated 06/07/2006, the District Collectors were authorized to give permission for usage of machinery for sand mining operation, if the public works Department made such requisition.
- The Hon'ble Madurai bench of Madras High Court in its review order vide review application No. 15/2011 in W.P. (MD)NO.11562/2010 dated 15/02/2011 permitted the Public Works Department to use minimum number of poclains in the river bed of Tamilnadu except in **Palar** and **Tamirabarani** rivers.
- Following that aforesaid order dated 15/02/2011, the Government issued the G.O. (D) No. 67/Industries (MMC-1)Department/ dated 11.03.2011, the District Collectors have been authorized to grant the permission for usage of Machinaries in sand quarry operation except palar and Tamirabarani rivers.
- The Hon'ble Madurai Madras High Court vide W.P.(MD) No. 4699/2012 and benches permitted the Public Works Department to use judicious number of poclains not more than two in the river bed of state except Palar and Tamirabarani rivers.
- The Hon'ble Supreme court in its interim order dated 09.05.2014 vide SLP(C)No. 12619-12636 of 2014, granted liberty to Public Works Department for mechanized mining in sand quarry operation.

- In G.O.(D) No. 110/Industries (MMC1)Dept. Dated 17.06.2015 reiterated the powers of the District Collectors to grant the permission of machines in sand quarry.

The Hon'ble High Court of Madras in its interim order dated 28-04-2017 in W.P. 36869/2017 directed as follows:

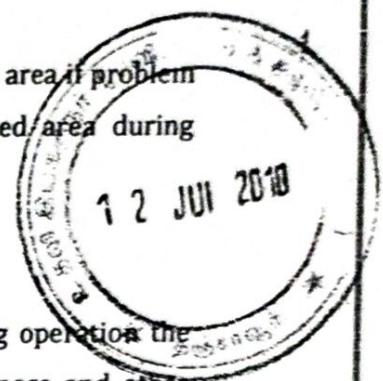
- ❖ "18. Therefore, having regard to the aforesaid, for the moment we are inclined to restrain the 1st Respondent (The State of Tamil Nadu) from working the mines adverted to against serial numbers 1 to 9 in the table set out above, by using mechanized means. The said mines can only be quarried by using manual means, in consonance with the EC document, issued in that behalf by DEIAA.
- ❖ 19. We also make it clear that apart from the aforesaid 9 mines, if, there are other mines, falling in category B2 qua which DEIAA, has indicated in its EC document, that they ought to be worked upon by using only manual means, the 1st Respondent will adhere to the said directive, till such time, an amendment is made in that behalf to allow for employing mechanized means."
- In this regard, necessary amendment is required for the Public Works Department for operating the sand quarries using required number of machineries.
- Accordingly, the Government has issued an order in G.O. No.(2D)21 Industries Department Dated. 02.06.2017 in which the Government had removed the powers to grant the deployment of machineries in sand quarry operations and the competent authority ie., DEIAA will decide the sufficient number of machineries in sand quarry operations after the Ministry of Environment and Forest, Notification Dated 15.01.2016 under Sec 3(2) of the Environment Protection Act.
- In the said Notification, the Government of India had stated that the Central Government had in consultation with the State Governments has prepared guidelines on Sustainable Sand Mining dealing with the provisions on Environmental Clearance.
- In terms of the said Notification, the Ministry of Environment and Forest had issued Sustainable Sand Mining Guidelines 2016, in which it is viewed that,

***"Depending upon the Location, Thickness of sand, Deposition, Agricultural land/River bed, the method of mining may be manual, semi mechanized or mechanized: however manual method of mining shall be preferred over any other method"***



- The China Avudayar Kovil Sand quarry is located in the river bed of Agniyar River. Since, the Agniyar River attains its mature stage in these stretches the deposition of sand varies from 4 to 5 Meters.
  - The formation of Sand shoals above the river bed is 1 to 2 Meters height causes huge ups and downs along the length and breadth of the river.
  - The huge requirement of sand for various infrastructure developments through various Government agencies and rapid urbanization could not be met by manual operations which may result in escalation price of sand in market.
  - Hence, the Public Works Department proposes to operate the sand quarry using four number of Poclains for loading the sand into the trucks by the way of scooping the sand from river bed, collecting the sand in one place, maintaining the Katcha roads in the mining area and to push off the trucks which are to be struggled in the Katcha roads.
  - Besides that, 26 numbers manual members are to be employed in the sand quarry operation for monitoring the operation, issuing the permit slips, to regulate the Traffic, Maintain the Bio-degradable pathways, monitoring the loading of sand, Sprinkling of water in pathways etc., Further, the lease area is demarcated for Manual mining without disturbing the lean stream flow and the water table in the river bed.
- a) **For Mining:**
- The Sand removed by Manual method by using Spade only.
- b) **Loading Equipment:**
- The Sand loaded by Manual Method only.
- c) **Transportation (includes within the mine and mine to destination:**
- Haulage of Sand will be done by Bullock cart of 0.14unit per load.

- Sometimes excavated sand will be stored in lease applied area if problem arising to approaching of Bullock Cart to the excavated area during quarrying operation.



**VI). Disposal of Overburden / Waste:**

- There is no Wastage is anticipated during the quarrying operation the entire Sand will be used for Domestic construction Purpose and other infrastructure development work in and around the District.

**VII). Brief note on conceptual mining plan for the entire lease period base on the geological, mining and environmental considerations:**

- Conceptual mining plan is prepared based upon Topography, Geological plan and section with an object of (Three) 3 Years systematic development of Lay outs, selection of Ultimate Pit Limit etc.,

**The Ultimate Pit Dimensions of the quarry are given below**

**Conceptual Table**

Table No: 11

Description	L (m)	W (m)	Depth (m) (Avg) (Above the theoretical river bed level)
Conceptual	300	100	1.80m

**7.0 BLASTING:**

- The quarrying operation is being carried out by semi-mechanized open cast method in conjunction with conventional method of mining using earth moving machineries only.
- It is a conventional Eco friendly quarrying proposed without Drilling and Blasting in this area.

## 8.0 MINE DRAINAGE

### a) Depth of Water Table (based on nearby Open wells and Water bodies etc.):

- The water table in this area is about 5-6 below ground level as observed in nearby collecting lake is located at the distance of 570m on Southwestern side.

### b) Arrangements and places where the mine water is finally proposed to be discharged:

- There is no such type of activities anticipated in this quarrying operation.

## 9.0 OTHER PERMANENT STRUCTURES (also shown in the map)

Table No: 12

Habitations / Village natham(300m)	There is no habitation situated within the radius of 300m. Please refer Plate No V).
Power lines (HT/ LT)(50m)	There is no HT or LT line located within the radius of 300m.
Water bodies (River, Pond, Lake, Odai, Channel etc.)(50m)	<ul style="list-style-type: none"><li>The lease applied area lies in the Agniyar River basin there is no other major water bodies like pond, lake., within the radius of 500m</li><li>There is Lake located at the distance of 570m in Southwestern Side for lease applied Area.</li></ul>
Archaeological / Historical monuments(500m)	There is no Archaeological / historical monuments within 500m radius from the area.
Road (NH, SH others)(50m)	<ul style="list-style-type: none"><li>The Nearest National Highway (NH-226) Thanjavur - Karaikudi which is about 48.0Km on the Western side of the area.</li><li>The State Highway (SH-146) Pattukottai- Eralivayal which is about 2.8 Km on Western side of the area.</li></ul>
Places of Worship(500m)	There is no place of worships within the Radius of 500m.
Reserved forest / forest / Social forest / Wild life	There are no Reserved forest / Social forest / Wild life sanctuary within 10km radius.

sanctuary etc.,(10Km)



**10.0 EMPLOYMENT POTENTIAL & WELFARE MEASURES:**

**1) Employment potential (Skilled, Unskilled)**

Table No: 13

Skilled		
S.No	Designation	Nos
1	PWD Assistant Engineer	1
2	Technical Assistant	1
3	Bullock cart driver	8
Total		10

**Employment potential (Unskilled),**

Table No: 14

Unskilled			
S.No	Designation	Nos	
5	Permit Slip Issuer	2	
6	Traffic Regulator	Entrance	2
		Exist	1
		Quarrying Site	1
7	Manual Loader for men	5	
8	Office Helper	1	
9	Track Maintainer	4	
10	Watchman	2	
Total		18	
Grand Total		28	

- Allowing for 10% absenteeism, the No. of men of roll will be around 20.
- The above manpower is adequate to meet out the production schedule and the Manual strength envisaged in the mining plan and to comply with the statutory provisions of the Mines Safety Regulations.

- It is ensured that the labor will not deploy less than 18 years. No child labor will engage or entertained for any kind of quarrying operation; all the labors engaged for quarrying operation will be insured till the end of life of quarry.



## II) Welfare measures,

### a). Drinking water :

- Packaged Drinking water will be brought from the water suppliers or agricultural land in the China Avudayar Kovil which is about 1.8Km on the Southeastern side of the area.

### b). Sanitary facilities:

- Hygienic Sanitary facilities will be constructed with in the quarrying area as semi-permanent structure.

### c). First Aid facility:

- First aid kits are kept in Mines office room if any accident happens first aid will be given at site and the injured person will be taken to the hospital immediately, Hospital is available at Pattukottai which is about 10 km on the Northwestern side of the area.
- The competent statutory Foreman will be in charge of First aid.

### d). Labors Health:

- In the Eco friendly opencast quarrying operation No drilling or blasting is involved only excavators are proposed used, hence labors health may not affect in any manner however periodically medical checkup will be conducted to all the workers in applicant own cost.

### e). Precautionary safety measures to the labourers:

- All the quarry workers will be provided with safety helmets, Mine Goggles, Ear plugs, Ear muffs, Dust mask, Reflector jackets and Safety Shoes as Personal Protective Equipments(PPE) as per the specification of Director of Mine Safety.
- Besides also conducting periodically medical checkup for all workers for any mine health related problems, proper training and induction will be given to quarrying personal to create awareness of Eco friendly quarrying operations

**PART: B**

**11.0 ENVIRONMENT MANAGEMENT PLAN:**



**a) Existing Land use pattern:**

- It is a barren land, the land is only used for free flow of water during rainy and flood season.

**b) Water Regime:**

- Ground water level is about the depth of 5-6 below ground level. The quarrying is restricted up to 1.80 m above theoretical river bed level; hence the quarry operation will not be affected by the ground water level in any manner.

**c) Flora and Fauna:**

- The main trees are *Julia Flora*, *Neem*, etc; There is no wild life, bird sanctuary, reserve or social forest near the area applied for quarrying lease.
- No flora of botanical interest or fauna of zoological interest noticed.

**d) Climatic conditions:**

- Both the North East and South West monsoon occurs here and the summer are hot and winter is cool.
- During April and May the temperature may goes up to 40°C and during winter the temperature does fall below 25°C. The annual rainfall is around 900mm.

**e) Human settlement:**

There are few villages are located in 5.0Km Radius from the lease applied area the details of the areas are given below.

Table No: 15

S.No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population
1.	China Avudayar Kovil	SE-1.5 Km	150
2.	Poovanam	NW- 4.4Km	250
3.	Naduvikkadu	NE-3.1Km	300
4.	Pallathur	SW-2.3km	330

**f) Plan for Air, Dust suppression:**

- In this Eco friendly quarrying operation only Manual method are proposed with out drilling and blasting, hence the air quality will not affect due to the quarrying operation.
- Water for Dust suppression will be extract from the existing borehole nearby tank.
- The estimated budget for Air Quality sampling would be around Rs. 50,000/-.

**g) Plan for Noise level control:**

- This Eco Friendly quarrying operation does not involve any blasting and drilling methods, hence noise will be minimal and this is only due to the movement of Bullock Cart only.
- Periodically Noise level monitoring will be carried out to check the Noise level in and around the Quarry.
- The estimated budget for Noise level monitoring would be around Rs. 25,000/-.

**h) Environmental Impact Assessment statement describing impact of mining on the next Two years:**

- The life span of the quarry is proposed for the period of (Three) 3 Years only, the proposed quarrying for a small production of Sand does not involve deep hole drilling and blasting.
- Such limited mining activity is not likely to cause any impact adversely on environment as far as pollution of Air, Water and Noise is concerned.

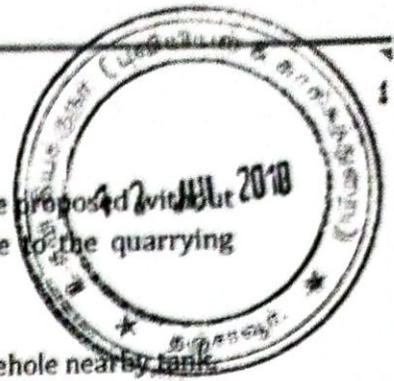
**i) Proposal for Waste management:**

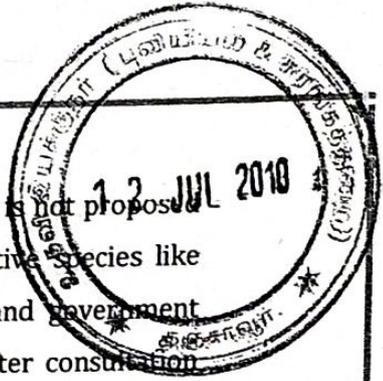
- There are no wastages anticipated during the quarrying operation.

**j) Proposal for Reclamation of land affected during mining activities and at the end of mining (Refilling / fencing etc.):**

- The quarry operation is restricted up to a depth of 1.0 m below the theoretical river bed level, after removing the Sand there is no proposal for backfilling or reclamation of this area.
- The quarried out land will only used for free flow of water during rainy and flood seasons, no cost involved for leveling the floor will be leveled naturally.

**k) Program of Afforestation (indicate extend, number, name of species to be afforested):**





- After the completion of the quarrying operation, the afforestation is not proposed inside the quarry lease area, the applicant ensures to plant native species like Pungam, Neem, etc., in the nearby villages and Village roads and Government schools to safeguard them surrounded by metal wire fencing after consultation with the competent local panchayat authorities.
- It is proposed to plant minimum 100 trees per Year. The totally estimate cost for afforestation and it maintenance is around **Rs. 20,000/-**

**I) Proposed financial estimate / budget for (EMP) Environment Management:**

- The proposed financial estimate budget for CSR would be around **Rs. 64,80,000** Rs.120/- per m<sup>3</sup> of the Sand cost from the royalty which will be handed over to the panchayat authority for the panchayat .
- The proposed financial estimate budget for EMP is around **Rs.5,55,000/-** for the period of (Three) 3 years only

**PROJECT COST / INVESTMENT:**

**i) Land cost:**

- It's a Government Land hence no cost is involved in this applied area.

**ii) Refilling / Fencing :**

- There is no proposal for refilling and fencing, hence no cost is involved.

**iii) Laborers shed :**

- 26 Bull cart labors are proposed for quarrying Sand. The Bull cart operators are from nearby Local villages, hence no cost is involved.
- Rest shelter will be constructed as semi-permanent structure at the cost of **Rs.50,000/-**

**iv) Sanitary facility :**

- Sanitary facility will be constructed as semi-permanent structure, the cost will be around **Rs.50,000/-**

**v) Others items (Leveling) : Nil**

**EXPENDITURE:**

**i) Drinking water facility for the laborers:**

- 26 labours at the rate of Rs 1500/- month for a period of (Three)3 years, the cost will be around **Rs.1,80,000/-**



**ii) Sanitary arrangement:**

- Sanitary maintenance at the cost of Rs 1500/- month the cost will be around Rs.1,80,000/- for a period of Three years.

**iii) Safety kits:**

- Rs.50,000 will be spent for the safety kits such as Helmet, Goggles, Ear plugs, Ear mask, Safety shoes and Reflector jackets.

**iv) Afforestation etc.,:**

- No Afforestation is proposed within the lease applied area, plantation will be carried out on the nearby villages and village roads etc., after consultation with the local panchayat authorities. The cost estimate is around Rs.20,000/-

**Estimated operational Cost of the project:-**

i) For Excavation of Sand	Nil
ii) Rest shelter	=Rs. 50,000/-
iii) Sanitary facility	=Rs. 50,000/-
iv) Formation of Bio-Degradable Pathways	=Rs. 5,00,000/-
v) Monitoring Studies through Institutes Fees	=Rs. 1,50,000/-
<b>Total</b>	<b>=Rs. 7,50,000/-</b>

**Estimated EMP Cost of the Project:-**

**Expenditure:**

i) Drinking Water	=Rs. 1,80,000/-
ii) Sanitary Arrangement	=Rs. 1,80,000/-
iii) Safety Kits	=Rs. 50,000/-
v) Afforestation	=Rs. 20,000/-
<b>Base Line Studies of this area</b>	
i) Air Quality Sampling	=Rs. 50,000/-
ii) Water Quality Sampling	=Rs. 25,000/-
iii) Noise Level Monitoring	=Rs. 25,000/-
iv) Ground vibration test	=Rs. 25,000/-
<b>Total</b>	<b>=Rs. 5,55,000/-</b>



**Cost towards Corporate Social Responsibilities (CSR):-**

(Socio economic development for panchayat)	= Rs. 64,80,000 /-
Estimated Operational cost of Project	= Rs 7,50,000/-
Estimated EMP Cost	= Rs 5,55,000/-
<b>Total Project cost</b>	<b>= Rs. 77,85,000/-</b>

(The Total Project Cost including the EMP cost is about (Rs.77,85,000/-) **Seventy seven lakhs eighty five thousands rupees only**)

**12.0 MINE CLOSURE PLAN:**

**a) Steps proposed for phased restoration, reclamation of already mined out areas:**

- It's a new quarrying project and there is no quarried out areas within the lease applied area.

**b) Measures to be under taken on mine closure as per Act & Rules:**

- This is a Eco - Friendly quarrying operation for a depth of 1.80m (Avg) Above theoretical river bed level does not require any Backfill, Reclamation and

Rehabilitation, any how the Mine Closure Plan will be prepared after removing the specify quantity of Sand shoals and Sand.

- Leveling of the floor will be leveled naturally.
- c) Mitigation measure to be undertaken for Safety and Restoration/  
Reclamation of the already mined out area:

- This is a fresh Sand quarry.

**13.0 ANY OTHER DETAILS INTEND TO FURNISH BY THE APPLICANT:**

- Permission will be obtained from the District Mines Office to extract the Sand from the Boundary barriers and for slopes.
- Care and precautionary measures will be taken for the safety of workers as per Rules and Acts.
- The applicant will endeavor every attempt to quarry the Sand economically without any wastage and to improve the environment and ecology.

Prepared by



Signature of Recognised Qualified Person

A. ABDUL SALAM, M.Sc.,

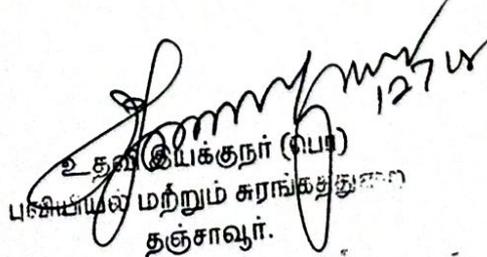
RECOGNISED QUALIFIED PERSON

Reg. No: RQP / MAS / 226 / 2011 / A

Place : Salem

Date :

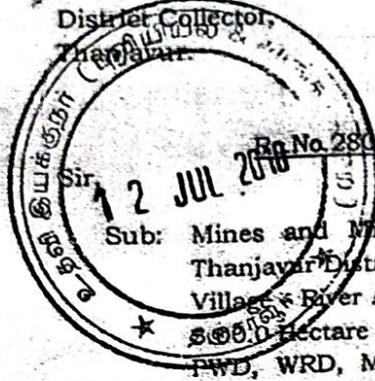
This Mining Plan is Approved  
Subject to conditions / Stipulation &  
Indicated in the Mining Plan Approval  
Letter No. 20 M. 2018 / dt 12718  
Office of the A.D. Geology & Mining, Chennai



உதவி இயக்குநர் (பொ)  
புவியியல் மற்றும் சுரங்கத்துறை  
தஞ்சாவூர்.

From  
Thiru.A. Annadurai, I.A.S.,  
District Collector,  
Thanjavur.

To  
The Executive Engineer,  
Public Works Department, WRD,  
Mining and Monitoring Division,  
Thanjavur.



Ref No. 280/Mines/2018, Dated: 04.07.2018

Sub: Mines and Minerals - Minor Mineral - Sand quarry -  
Thanjavur District - Pattukottai Taluk - Chinaavudayar Kovil  
Village - River Agniyar - in S.F.No.8 & 9 - Over an extent of  
3.00.0 Hectare - Permission requested by Executive Engineer,  
PWD, WRD, MM Division, Thanjavur - Joint Inspection  
conducted - Recommended - Precise area communicated -  
Reg.

- Ref: 1. The Executive Engineer, Public Works Department,  
WRD (i/c), Mining and Monitoring Division, Thanjavur  
letter Rc.No.F1/DO/Estimate / Thanjavur Dated:  
14.06.2018.  
2. Joint Inspection Report dated 20.06.2018  
3. Other connected records.

SSSSSS

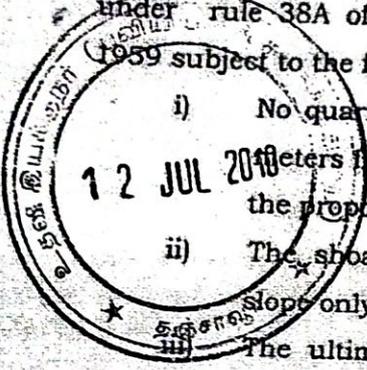
The Executive Engineer, Public Works Department, WRD, Mining  
and Monitoring Division, Thanjavur has submitted a proposal requesting  
sand quarry permission in S.F.No.8 & 9 over an extent of 3.00.0 hecets in  
Agniayar River of Chinaavudayar village, Pattukottai Taluk, Thanjavur  
District vide reference 1<sup>st</sup> cited.

2) In connection with the above, a Joint Inspection was carried out  
on 23.06.2018. The team consisting of the Revenue Divisional Officer,  
Pattukottai, Assistant Director(i/c), Geology and Mining, Thanjavur,  
Assistant Executive Engineer, PWD., Mining and Monitoring Division,  
Thanjavur, along with the Assistant Executive Engineer, TWAD, Thanjavur  
and submitted their joint inspection report vide reference 2<sup>nd</sup> cited.

3) Under the circumstance stated above, the area proposed for  
sand quarrying satisfied the restrictions made in rule 36 of Tamil  
Nadu Minor Mineral Concession Rules 1959. There is no existing  
sand quarry within a radial distance of 1KM from the area.

4) In view of the above, the above said sand quarry over an  
extent of 3.00.0 Hectares of Government poramboke land in River  
Agniayar. The pit the length of 300 meters and the breath of 100  
meters in S.F.No.8 & 9 of Chinna Avudaiyar kovil Village in

Pattukottai Taluk, Thanjavur District may be considered for grant under rule 38A of Tamil Nadu Minor Mineral Concession Rules, 1959 subject to the following conditions:-

- 
- i) No quarrying operation shall be carried out within 500 meters from the drinking water well of the local bodies of the proposed area.
  - ii) The shoals/dunes above natural theoretical river bed slope only shall be quarried at the first instance.
  - iii) The ultimate working depth shall be one meter from theoretical river bed level.
  - iv) Sand Quarrying shall not be carried out below ground water table under any circumstances.
  - v) Stream Mining shall not be allowed.
  - vi) It shall be ensured that excavation of sand do not disturb or change the underlying soil characteristics of the river bed where quarrying is proposed to be carried out.

Further, it is ascertained that, during inspection, no objection was raised from the Public for the grant of sand quarrying in the proposed area.

4) Finally, they have recommended for the grant of sand quarry permission in S.F.No.8 & 9 over an extent of 3.00.0 hecets in Agniyar River of China avudayar kovil village, Pattukottai Taluk, Thanjavur District to the Executive Engineer, Public Works Department, WRD (i/c), Mining and Monitoring Division, Thanjavur.

5) Based on the above recommendations of the Joint Inspection Officials and in order to Bullock cart the need of sand for the construction purposes of the public and the Government Organisations, opening of a new sand quarry in the proposed area is an essential one.

6) As per Rules 41 & 42 of TNMMCR 1959 amended vide G.O.(Ms) No.79 Industries (MMC1) Department dt.06.04.2015, "Mining Plan and Environmental Clearance are pre-requisite to the grant of quarry lease for Minor Minerals like sand.

7) Therefore, in view of the above, an extent of 3.00.0 hecets in Agniyar River S.F.No.8 & 9 Chinaavudayar Kovil village, Pattukottai Taluk, Thanjavur District is considered as "Precise area" for the grant of sand quarry permission for a period of three years, on production of the Approved Mining Plan and Environmental Clearance obtain from the

ANNEXURE-..... I

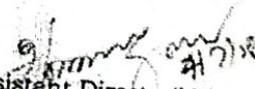
District Level Environmental Impact Assessment Authority, Thanjavur  
for grant of sand quarry permission, subject to the following conditions.

- i) Quarrying of sand should be carried out 50m away from the bank of the river.
- ii) Should provide permanent bench mark which shows the level of the river bed in the subject survey number.
- iii) Boundary stones should be laid all along the demarcated area as permitted.
- iv) Quarrying of sand should be down only in the mid - stream.
- v) River course should not be disturbed or changed due to quarrying of sand.
- vi) Should not cause any hindrance to the public while quarrying of sand in the river bed.
- vii) The conditions specified in Tamil Nadu Minor Mineral Concession Rules 1959, should be strictly adhered during the course of quarrying of sand.

8) Hence, the the Executive Engineer, Public Works Department, WRD (i/c), Mining and Monitoring Division, Thanjavur is requested to produce the draft Mining Plan before the Assistant Director, (G&M), Thanjavur and prepared by a Recognized Qualified Person for approval and forwarding the same to the District Level Environmental Impact Assessment Authority, Thanjavur for getting Environmental Clearance, within a period of 3 months from the date of receipt of this precise area communication.

Sd/-A. Annadurai  
District Collector,  
Thanjavur.

//Forwarded/By Order//

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

  
4.7.18



A. ABDUL SALAM, M.Sc.,  
RECOGNISED QUALIFIED PERSON  
Reg. No: RQP / MAS / 226 / 2011 / A