Dalmia
Bharat Cement

newthink! cement! sugar! refractories! power!

DPM:MINES:KLK (ML-3):MOEF:11/2019 04.11.2019

The Addl .Principal Chief Conservator of Forests(C)
Ministry of Environment and Forests and Climate Change
Regional Office (SEZ),
Ist and IInd Floor,
Handloom Export Promotion Council,
34, Cathedral Garden Road,
Nungambakkam,
Chennai - 34

Sir,

Sub: MoEF First Half Yearly (period from January'19 to June'19) Status of Environmental Clearance compliance conditions for the year 2019-Reg.

Ref: Environmental Clearance Lr.No-J-11015/340/2005/IA.11(M)dated 24.10.2005

With Reference to the above subject, we are herewith submitting the following reports enclosed in Annexures with respect to Kallakudi Limestone Mines (ML-3).

1 .Status of Environmental Clearance compliance conditions- (Annexure-1)
2. Environmental Monitoring Reports for the period Jan-2019 to June-2019-(Annexure-2)
3. Social Welfare activities-(Annexure-3)
4. Green belt development details along with Photographs (Annexure-4)

We request your good office to kindly acknowledge the receipt of the compliance report.

Thanking you

Yours faithfully,

For Dalmia Cement (Bharat) Limited,

4/11/19

(B.Radhakrishna Kanth)
Sr.Manager (Mines).

Encl: Annexure - 1,2,3,4

Annexure-1

Compliance Report on Conditions Issued by MOEF on Kallakudi Limestone Mines (ML – III) vide Lr. No. J.11015/340/2005-IA-II(M) dated 24.10.2005

S.No	Conditions	Compliance
A	**Specific Conditions**	
(i)	Check dams and siltation ponds of appropriate size should be constructed wherever required to arrest silt and sediment flows within the lease area. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly de silted and maintained. Garland drain (size, gradient & length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains.	Garland drainage are made all along the peripheral of mine pit. All the water collected inside the pit is channelized to the sump. The sump is designed in such a way that safety margin over the previous rainfall data. The rainwater & seepage water collected in the mine sump is allowed to settle in the sump. Hence the mine sump acts as a settling tank. The water collected inside the pit is used for haul roads/greenbelt development
(ii)	No drilling and blasting operations shall be undertaken without prior approval of this Ministry and Competent authorities.	No drilling and blasting is done as mining is being carried out by deploying Mega Rock Breakers.
(iii)	Crusher should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, haulage roads, transfer points, etc.	Crusher is located at the plant site located at 3 Kms away from the mines. The crusher is operated with bag filters to arrest the fugitive dust emissions from crushing operations, haulage roads, transfer points etc
(iv)	Water sprinkling arrangements to control the fugitive dust generation from the haulage roads and to the crusher.	Water sprinkling on haul roads is done regularly to suppress the dust.

(v)	Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral ore. The vehicles should be covered with tarpaulin and should not be overloaded.	Proper periodical maintenance practice is being followed for equipments and tippers used in mining operations The transportation vehicles are loaded upto the body level and covered with tarpaulin during the transport.
(vi)	The higher benches of the excavated void/mine pit which is not being backfilled and is instead being converted into a water reservoir, shall be terraced and plantation done to stabilize the slopes. Peripheral fencing shall be done along the excavated area.	Fencing is done all along the boundary of the area.
(vii)	Plantation should be developed by planting the native species around the ML boundary, along the roads, etc., in consultation with the local DFO/Agriculture department. The density of the trees should be around 2000 plants per hectare.	An intensive afforestation programme is being carried out around M.L boundary. The survival rate is more than 90%. The dense plantation done and maintained, for about 2000 trees/hectare.
(viii)	A final mine closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years prior to closure of mine for approval of the ministry.	Not applicable at this stage.
(ix)	Consent to operate should be obtained from State Pollution Control Board expanding mining activities.	Consent to Operate obtained from Tamil Nadu State Pollution Control Board and is valid upto 31st March 2024.
B	**General Conditions**	
(i)	No change in technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	Fully mechanized method of Mining is being followed and there is no change in mining technology.
(ii)	No change in the calendar plan including excavation, quantum of limestone, waste / OB dumps should be made.	The quantity of limestone is restricted as per the plan.
(iii)	Ambient air quality-monitoring stations should be established in the core zone as well as buffer zone for SPM and RPM monitoring. Location of the ambient air quality stations should be decided based on the meteorological data, topographical	Ambient Air quality readings are taken from the stations already established in the core zone and buffer zone as per our REIA/EMP approved by your office. TNPCB monitoring periodically.

	features and environmentally and ecologically sensitive targets and the frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	
(iv)	Data on air quality should be regularly submitted to the Ministry including its Regional Office at Bangalore and the State Pollution Control Board / Central Pollution Control Board once in six months.	The data on ambient air quality is submitted to Regional office regularly.
(v)	Adequate measures for control of fugitive emissions should be undertaken such as water spraying arrangements on haul roads, loading and unloading points and transportation of minerals, etc. Fugitive dust emissions from all sources should be regularly monitored and data recorded properly.	Water sprinkling is being done on haul roads regularly. Dust emission is monitored every fortnightly and data maintained.
(vi)	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM etc., should be provided with ear plugs/muffs.	Noise level is maintained well below 85 db. Periodical monitoring is carried out by TNPCB on yearly basis. Persons are provided with PPE.
(vii)	Industrial waste water (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of effluents from the Workshop.	The workshop water is properly collected in the up flow filters before discharge, in order to trap the oil and grease in the effluent. The water is then used for afforestation purposes
(viii)	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be	All our mine employees are provided with personnel protective equipment such as dust mask,earplugs, shoes, helmets etc. Periodical Medical Examination is done for all our Mine employees regularly. Training on Safety and Health aspects is given at regular intervals for all our Mine Employees as per Mines Vocational

	undertaken periodically and corrective measures taken, if required.	training Rules
(ix)	The funds earmarked for environmental protection measures should be kept in separate account and not diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment & Forests.	The fund earmarked is spent for the Environmental Protection measures only.
(x)	The project authorities should inform to the Regional Office located at Bangalore regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	The final approval of the project was informed to the MoEF, Regional Office at Bangalore. The fund required for the project was managed from the resources internally from the company. Hence the date of Financial Closure is not applicable.
(xi)	The Regional Office of this Ministry located at Bangalore shall monitor compliance of the stipulated environmental conditions. The project authorities should extend full co-operation to the officer(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.	–
(xii)	A copy of the clearance letter should be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	A copy of the clearance letter was given to Panchayat as advised.
(xiii)	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's/Tahsildar's office for 30 days.	–
(xiv)	The Project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within 7 days of issuance of the clearance letter informing that the project has been accorded environmental clearance and a copy of	The Advertisement was given in two local newspapers as advised by you and the copy of the same was submitted to your Regional office.

	the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment & Forests at http://envfor.nic.in.	

C. Conditions stipulated by Tamilnadu Pollution Control Board

	Conditions	Compliance
i	The unit shall monitor the ground water level/ quality in the selected wells in Kallakudi village used for drinking as well as agricultural purposes and report of the same shall be furnished to the board on a seasonal basis to ensure that the ground water level is not depleted.	Regular monitoring of ground water level (once in 3 months) is carried out. The water level and the quality of the selected wells in Kallakudi village and the report of the same are furnished to the Board on seasonal basis.
ii	Wherever practicable, the mine water shall be utilized for irrigation of the plantations raised to stabilize the mine waste dumps.	The mine water is being used for afforestation & water sprinkling on haul roads.
iii	Wherever practicable, the mine water shall be utilized for irrigation of the plantations raised to stabilize the mine waste dumps.	The mine water is being used for afforestation & water sprinkling on haul roads.
iv	Acid mine water, if any has to be treated by the unit, to satisfy the standards prescribed by the Tamilnadu Pollution Control Board.	As this is a Limestone mining project, this is not applicable.
v	The unit shall provide safety measures like polynet near habitations to avoid any damage to public while mining.	No drilling and blasting is done as mining being done by deploying Mega Rock Breakers.
vi	The overburden and mine waste shall be used for reclamation, restoration and rehabilitation of the terrain without affecting the natural drainage and water regimes.	No Overburden is available in the mining area.
vii	Possibility of dumping the overburden and waste is available low lying areas accompanied by leveling and providing soil cover to utilize the land profitability may be explored.	No Overburden in the mining area.

viii	If considered suitable, the overburden may be used as road metal or construction aggregates after crushing into proper size.	Not applicable
ix	Peripheral plantations shall be raised as wind belts to minimize the dry tailings being air borne.	Plantations developed all along the boundary of mining area.
x	Tailing dams for land disposal shall be constructed to their final heights before mining commences. All down stream slopes of tailing dams shall be vegetated as quickly as possible.	The area is a flat terrain. Hence this condition does not arise.
xi	The unit shall provide AAQ monitoring stations near vadugarpettai village so as to assess the SPM level. Locations will be selected in consultation with DEE, TNPCB.	AAQ monitoring stations provided as per TNPCB instruction and TNPCB monitoring periodically on yearly basis.
xii	Air Pollution measure have to be provided for controlling gaseous pollutants (SO2, NOx and CO) to satisfy the standards prescribed by the Tamilnadu Pollution Control Board.	Gaseous pollutants are well within the limits as per standards prescribed by the TNPCB.
xiii	To prevent dust from being air-borne transport equipment shall be leak proof and properly covered with tarpaulin.	All the transport vehicles transporting limestone from mines to factory is covered with tarpaulin to prevent dust from being air – borne.
xiv	The unit shall adopt water mist system, dust extraction system in the wagon driller so as to reduce the dust generation during drilling.	No drilling and blasting is done as mining being done by deploying Mega Rock Breakers.
xv	To minimize dust pollution, measures such as adoption of hoods at transfer point, proper dust suppression or dust extraction system for conveyors shall be introduced. The dust concentration shall satisfy the standards prescribed by the Tamilnadu Pollution Control Board.	There is no crusher installed at mines. The transport of limestone is not done through belt conveyors. All the transport vehicles transporting limestone from mines to factory is covered with tarpaulin to prevent dust from being air – borne.
xvi	The unit shall make necessary arrangement for wetting of haulage roads to arrest the dust generated due to movement of vehicles.	Black topped / WBM haul roads are formed to arrest the dust generation in mine haul roads. Water sprinkling is regularly carried out with the help of water

		sprinkling tankers for wetting of haulage roads.
xvii	The waste dumps, active mining area, sub grade dumps shall be sprinkled with water so that the air borne dust generation shall be minimal.	Water sprinkling is carried out regularly in the mining area and in the sub grade dumps to minimize the dust generation.
xviii	Land use plan shall be prepared to encompass pre-operational and post operational phases of the mine based on general survey and collection of relevant information.	Land use plan as envisaged in the approved mining plan is followed.
xix	Vegetational barriers shall be raised along the contours in the higher elevation areas for the prevention of soil erosion and for arresting mine wash.	The mining area is a flat terrain, however the Vegetational barriers are planned in the afforestation programme.
xx	It has to be ensured that waste shall be dumped within the lease area and it will not create any damages to adjacent property, agricultural fields, public utility, human settlement and shall not cause any barrier or obstruction to any water course.	No overburden in the Mine lease area.
xxi	The unit shall dump the excavated earth after studying the Engineering properties such as stability of slope, lateral earth pressure, etc., so as to avoid landslide.	No overburden in the Mine lease area.
xxii	Garland drains, shall be provided around the open cast excavation area, stacking, loading area and periphery of waste dumps so as to collect and discharge the in rush of water, during unprecedented heavy rain. The water collected in the garland drain will flow towards the settling tank.	The rainwater is collected in the mine sump, which acts as the settling tank. Only the clear water is being pumped out.
xxiii	The unit shall provide collection sump at suitable location to collect the rainwater and seepage water and the same shall be used for irrigation.	The mine sump acts as a collection sump for the rainwater and seepage water. The water so collected is being used for development of plantations and also for the dust suppression purposes.
xxiv	The unit shall not dump the solid waste in the ground water recharge/catchment area under any	There is no generation of solid waste being a mining project.

	circumstances	
xxv	The unit shall provide check dam across the final drain from the mine and peripheral bunds on the outer edge of abandoned benches that the solid shall not carried away by storm water	The rainwater & seepage water collected in the mine sump is allowed to settle in the sump. Hence the mine sump acts as a settling tank. Only the clear water is being pumped out.
xxvi	The banks of streams in the mining area shall be intensively vegetated to prevent the discharge of sediments into the streams.	There are no streams in the mining area. Hence not applicable.
xxvii	The units shall collect the topsoil from the mining area and preserve it biologically and to utilize the same for plantation of trees during the reclamation programme.	The topsoil is utilized for development of plantation as per the approved mining plan.
xxviii	The unit shall use leak proof containers for the storage and transportation of oil/grease/ workshop waste so as to prevent the spillage in the mining area.	Leak proof containers are provided for the storage and transportation of oil/grease/workshop waste so as to prevent the spillage in the mining area.
xxix	The unit shall ensure that the mining activity shall not affect the habitation and villages situated nearby and no blasting shall be carried out.	No drilling and blasting is done as mining being done by deploying Mega Rock Breakers.
xxx	The unit shall ensure that the limestone and waste rock are being excavated by using rock breakers without drilling and blasting as reported.	Hydraulic rock breakers are deployed for mining directly from the mine benches.
xxxi	Stack of adequate height shall be provided for Diesel Generators if any and the emission let out shall satisfy Ambient Air Quality standards prescribed by the Board.	Not applicable as no diesel generator is being used at mines.
xxxii	The unit shall carry out the technological and biological reclamation works in the mined area so as to develop self-sustaining eco-system.	The reclamation will be carried out as per the approved mining plan and the EIA study report.
xxxiii	To avoid landslides, slope shall be planted with adequate trees or other soil binding vegetation.	Plantation is developed all along the boundary of the mining area.
xxxiv	The unit shall treat the sewage and wastewater from canteen in a full fledged treatment system to satisfy	Not applicable, since no canteen in mines.

	the standards prescribed by the Board and to utilize the same for green belt development	
xxxv	The wastewater generated from the workshop shall be collected separately and it shall be treated through up flow filter to separate the oil and grease.	The waste water from workshop is treated in the up flow filter, which in turn is being used for development of plantations.
xxxvi	The unit shall ensure that noise generated from the mining operation and other allied activity shall satisfy the ambient noise level standards prescribed by the Board.	Noise level being maintained well within the limit. Periodical monitoring is done by TNPCB on yearly basis.
xxxvii	The unit shall provide suitable storm water network with necessary gradient in the mining area in the dumpsite to drain storm water to collection pit during monsoon period.	Proper gradient is maintained in the mining area in order to drain the storm water to collection pit during the monsoon period.
xxxviii	Diversion of water course would also have an effect on flora and fauna resulting in ecological imbalance to some extent. The measures proposed for changing the water course shall ensure the rehabilitation of flora / fauna.	There is no plan for diversion of any watercourse in the area.
xxxix	Periodical monitoring shall be done by the unit to ensure the compliance with effluent standards, ambient air quality standards and ground water table in monitoring wells.	Periodical monitoring is being carried out.
xxxx	The unit has to approach the Board for issue of consent by enclosing the Environmental Clearance issued by the Ministry of Environment and Forests, Government of India.	Consent to Operate obtained.
xxxxi	The water pumped out during the mining activity shall be properly collected and utilized and proper proposal shall be furnished in this regard.	The rainwater & seepage water collected in the mine sump is allowed to settle in the sump, which acts as a settling tank. Only the clear water is being pumped out and used for developing the plantations & suppression of dust
xxxxii	The reclaimed mined area of the unit shall be developed as a green belt with trees having a thick canopy cover. The number of trees planted should be at the rate of 2000	Green belt is developed all along the boundary of mining area and plantations earmarked area.

	trees / hectare. The species, which are found locally and those, which are capable of colonizing the degraded areas, should be preferred.	
xxxxiii	The unit must provide Rain Water Harvesting facilities within the premises so as to increase the recharging of ground water in that area.	Rain water harvesting is practiced in our mines, plant and colony premises.
xxxxiv	The unit shall maintain good house keeping	Good housekeeping practice is being adopted.

Annexure-2

KALLAKUDI LIMESTONE MINES (ML - 3)					
Environmental Clearance No:-J-11015/340/2005/IA.11(M)dated 24.10.2005					
AIR QUALITY - KALLAKUDI LIMESTONE MINES FIRST HALF YEARLY REPORT					
(January 2019 to March 2019)					
Abstract of Ambient Air quality data for the period January 19 to March 19					
Station Name	PM - 2.5 (µg/m3)	PM - 10 (µg/m3)	SO2 (µg/m3)	NOX (µg/m3)	CO (µg/m3)
No. of Observations	6	6	6	6	6
Kallakudi Limestone Mines	27	46	12	17	< 114.5
Vadugarpattai Village	21	36	9	13	< 114.5
Kovandakurichi Village	18	33	8	11	< 114.5
Thappai	17	29	9	11	< 114.5
Kil Arasur	24	42	11	13	< 114.5
Palaganatham	14	26	7	9	< 114.5
Varakuppai	14	23	7	7	< 114.5
Pullambadi	24	46	12	15	< 114.5
NAAQ - Norms	60	100	80	80	2000

KALLAKUDI LIMESTONE MINES (ML - 3)

Environmental Clearance No:-J-11015/340/2005/IA.11(M)dated 24.10.2005

AIR QUALITY - KALLAKUDI LIMESTONE MINES FIRST HALF YEARLY REPORT

(April 2019 to June 2019)

Abstract of Ambient Air quality data for the period April 19 to June19

Station Name	PM - 2.5 (µg/m3)	PM - 10 (µg/m3)	SO2 (µg/m3)	NOX (µg/m3)	CO (µg/m3)
No. of Observations	6	6	6	6	6
Kallakudi Limestone Mines	24	60.3	7.1	19.4	< 114.5
Vadugarpattai Village	21.3	53.8	6.3	17.3	< 114.5
Kovandakurichi Village	17.3	44	5.1	14.2	< 114.5
Thappai	16.8	42.9	5.0	14.0	< 114.5
Kil Arasur	19.7	50	5.8	16.1	< 114.5
Palaganatham	22	55.9	6.5	18.0	< 114.5
Varakuppai	17.7	45.1	5.3	14.5	< 114.5
Pullambadi	25.5	64.4	7.5	20.5	< 114.5
NAAQ - Norms	60	100	80	80	2000

Annexure-3

WATERSHED PROJECT SOIL &WATER CONSERVATION

AGRO FORESTRY AND DRY LAND HORTICULTURE AT WSD INVERVENTATION VILLAGES

WATERSHED PROJECT SOIL &WATER CONSERVATION

CONSTRUCTION OF SUNKEN POND IN PROGRESS AT MELARASUR WATERSHED VILLAGE

WATERSHED PROJECT - SOIL & WATER CONSERVATION

NEW SUNKEN POND AT KOVANDAKURICHI VILLAGE

LIVELIHOOD -PROGRAM -SHG DEVELOPMENT

MEETINGS WITH SHG FEDERATION ON LIVEHOOD INTIAITIVE

LIVELIHOOD PROGRAM SKILL TRAINING

WORKERS EDUCATION TRAINING PROGRAM

COMMUNITY CELEBRATION

PONGAL CELEBRATION AT SKILL TRAINING CENTRE

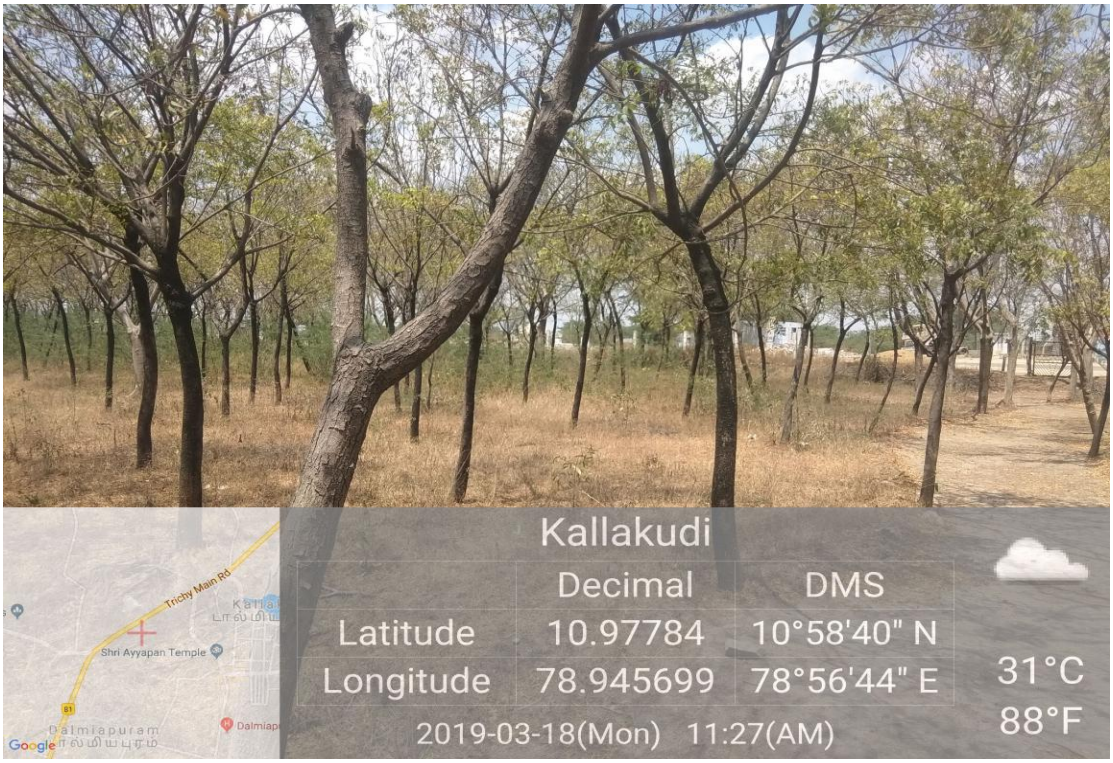
ZERO BUDGET INITIATIVE

POULTRY FARMING ENTREPRENUR DEVELOPMENT- UNDER LIVELIHOOD PROGRAM

Annexure-4

Details of Green Belt for Kallakudi Limestone Mines (ML-3)		
Year	**No of Saplings**	**Extent(Ha)**
As on 31.03.2018	3180	3.90
2018-19	20	0.20
As on 31.03.2019	3200	4.10

Kallakudi Limestone Mines (ML-3)
Photographs of Green Belt Development




Kallakudi
Decimal
DMS
Latitude
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Longitude
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78°56'44" E
2019-03-18(Mon) 11:27(AM)
31°C
88°F
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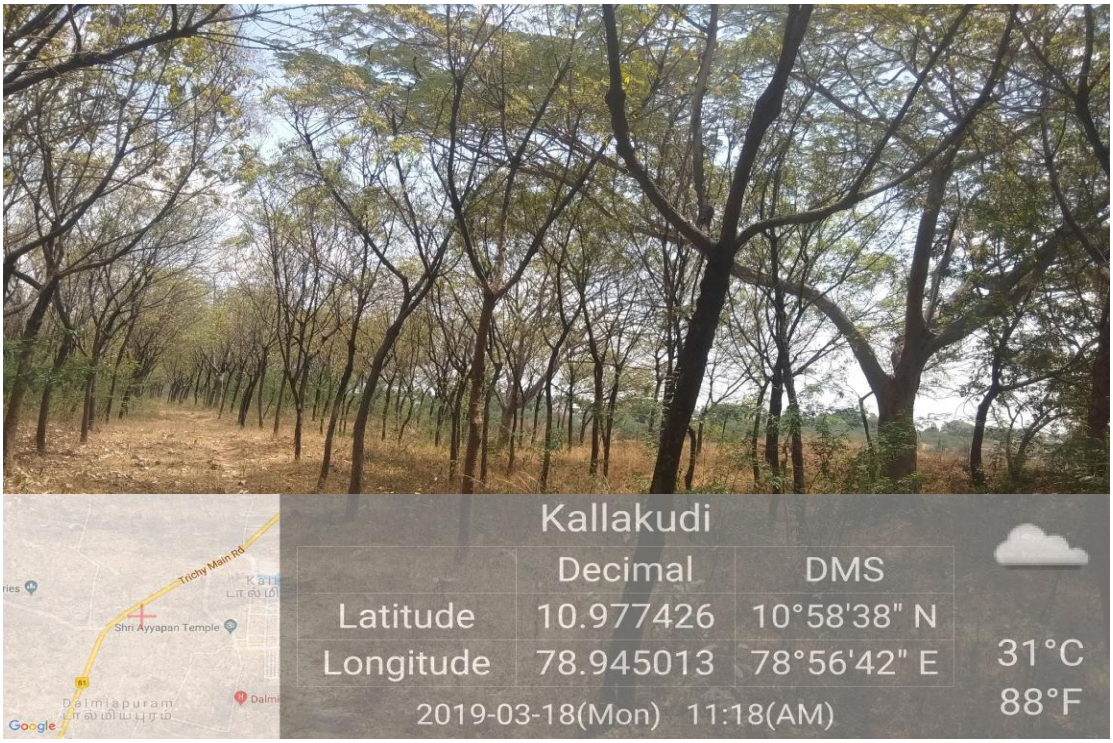
Shri Ayyapan Temple
Dalmiapuram
Google


Kallakudi
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DMS
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10°58'38" N
Longitude
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78°56'42" E
2019-03-18(Mon) 11:18(AM)
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88°F
Trichy Main Rd
Shri Ayyapan Temple
Dalmiapuram
Google