



TSPL/MIN/MoEF/ENV/17-18/1127

Srikakulam,
25-11-2017.

To
The Regional Office (South Eastern Zone)
Ministry of Environment, Forests and Climate Change
1st and 2nd floor, HEPC Building, No.34,
Cathedral Garden Road, Nungambakkam,
Chennai – 600034

Dear Sir,

Sub: Srikurmam Mineral Sand Mine of Trimex Sands Pvt. Ltd., Village Vatsavalasa,
Gara Mandal, Srikakulam District, Andhra Pradesh., Submission of half yearly
Environmental Clearance compliance report for the period of Apr'2017 –
Sep'2017 – Reg.

Ref: Environmental Clearance vide No.J-11015/175/2011-IA.II (M) dated
17-04-2015.

With reference to the subject Environmental Clearance granted vide reference above, we are
submitting the half yearly EC compliance report for the period of Apr'2017 –Sep'2017.

Thanking you

Yours truly

Sr. Vice President (Mines)

CC to : 1. APPCB, RO, VZM
2. CPCB, ZO, Bangalore

Trimex Sands Pvt Ltd: Vatchavalasa (V), Gara Mandal, Srikakulam District - 532 404, Andhra Pradesh, India.

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CIN : U14299TN2004PTC071437



Compliance report on E.C Conditions

Environmental Clearance Vide No.J-11015/175/2011-IA.II (M) dated 17-04-2015

A. Specific conditions.

S.No	Conditions	Compliance
1	The 325 dunes recorded in the Trimex Sands Pvt. Ltd. (TSPL) area of which, 13 dunes exist beyond 100m from the high tide, shall be protected and maintained. All effort should be made to ensure that existing natural vegetation of these dunes are fully protected.	Dunes which are existing beyond and up to 100mts from HTL are protected by erecting fencing all along the 100m line. Also efforts are taken to protect the vegetation on these dunes by deploying security staff round the clock.
2	Rs. 1.80 crore proposed for Wildlife Conservation plan should be deposited within one month of issue of EC letter for implementation of Wildlife Conservation plan by the Department.	Deposited Rs180.00 Lakhs with the PCCF, Govt. of AP on 10.07.2017 (Annexure-1)
3	The Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the standing Committee of National Board of Wildlife, as may be applicable to this project.	Not Applicable, as the area doesn't fall under Wild Life Zone.
4	The Environmental clearance is subject to obtaining clearance under the Coastal Regulation Zone, Notification, 2011 to this project.	CRZ Clearance obtained vide F.No.11-67/2013-IA-III dated 28-04-2015 (Annexure-2)
5	Necessary AERB clearance shall be obtained under the Atomic Energy (Radiation Protection) Rules, 2004 for operation of Beach Sand Minerals (BSM) facility	AERB License has been obtained and copy of same submitted as Annexure-3
6	The mining activity will commence only after taking necessary approval of water drawl from the concerned Authority of State Government.	No ground water is drawn for the project use. For wet mineral concentration processing, water is drawn from the Vamsadhara river, for which approval is taken from the State Govt (Annexure-4). Daily requirement of river water is about 8000-10000 m ³ , for which we are making payment to the State Govt.
7	The mined area should be replenished immediately.	The mined-out area is backfilled using the tailings generated during separation of minerals (Annexure 5). As on 1 st Oct 2017, about 293.54 Ha area is mined, of which 273.64 Ha area is backfilled by dumping 16.34 Million Tons of tailings.
8	The mineral separation plant/pre-concentration plant should be located outside coastal Regulation Zone area.	Mineral separation plant and pre-concentration plants are located outside CRZ area. Map enclosed as Annexure -6
9	Implementation of Wildlife Conservation plan for schedule – I species. The conservation plan should be species specific, should have allocation of budget, time frame and agencies to be responsible for the	Schedule-I species available in the study area is Olive Ridley Turtle and a detailed conservation plan is prepared through ENVID Group, Andhra University. This

	implementation for each of the target species, Conservation plan shall be approved by the State Government.	plan is approved by the Principal Chief Conservator of Forests (WL) & Chief Wildlife Warden, Hyderabad vide Rc. No:22899/2013/WL-3 Dt:11.11.2014 (Annexure -7).
10	No mining shall be carried out in the inter-tidal zone and within 100m from HTL towards landward side.	No mining is carried out in the inter-tidal zone and within 100m from HTL towards landward side. Area beyond 100m from HTL area is demarcated with boundary pillars & barbed wire fencing. Enclosed as Annexure-8 .
11	Identification of sand dunes shall be done prior to undertaking mining activities and their conservation shall be as per MoEF guidelines from time to time. No flattening of sand dunes shall be carried out. Dressing or altering the sand dunes, hills, natural features including landscape changes shall not be carried out for beautification/recreational purposes. Precautions shall be taken to prevent intrusion of sea water into hinterland to avoid problem of submersion/flooding.	All sand dunes are identified before undertaking mining activities, by the ENVID group, Andhra University, Visakhapatnam. In total, 325 dunes are identified of which 13 are available in the mining zone and the remaining are in no mining zone i.e. between HTL and 100 m line towards landward side from the HTL. All these dunes are being protected and maintained as per the approved plan. All precautions as per the recommendations of the Hydro Geological study by the Andhra university are being implemented to prevent intrusion of sea water into hinterland (Annexure-9)
12	Fencing of entire lease area barrier of 100 meters towards sea to prevent olive turtle nesting ground.	100m from High Tide Line (HTL) towards landward side is demarcated with pillars along with barbed wire fencing to protect olive ridley turtle nesting ground (Annexure-8)
13	Tailings and rejects shall be filled back systematically after separating the heavy/rare minerals. Sand tailing shall be put back at the mined area on completion of extraction of rare minerals. Afforestation shall be taken up with suitable species on mined out areas to prevent erosion of shoreline. Under no circumstances, the tailings will be dumped in agricultural lands, wet lands, paddy fields, canals and the backfilling will be carried out only in the inland mined out areas.	Sand tailings and rejects are being back filled to the mined-out areas systematically after separating the heavy minerals. Afforestation is being carried out with different species on backfilled lands to prevent erosion of shoreline. As on 1 st Oct 2017, about 293.54 Ha area is mined, of which 273.64 Ha area is backfilled by dumping 16.34 Million Tons of tailings. About 242.10 Ha area is planted with 607139 Nos. of saplings of Casuarina, Acacia, Eucalyptus, Cashew species. No waste is dumped outside the mining lease area.
14	The mining activities shall be regulated in such a way that there will be minimum disturbance to the fauna during spawning and breeding period i.e. from	No mining activity is carried out near the 100 m line during the breeding period.

	November to March.	
15	Mining shall be carried out in phases only. Simultaneous opening of entire beach front is not permissible, There shall be uninterrupted access to the seafront, Minimum 20m width of approach roads shall be provided where necessary.	Mining activity is being done in phases and entire beach front is not opened up at any point of time. For the uninterrupted access of the fishermen to the beach, a 20 m width approach road is provided.
16	Tapping of ground water is expressly prohibited in CRZ area. A network of ground water observation wells within and outside the lease area shall be established for regular monitoring of ground water quality and water levels in the surrounding area. These analysis as per norms much be documented and sent regularly (every three months) to the Regional Office MoEF.	No ground water is tapped from the CRZ area. Established 11 Nos. of ground water observation wells within and outside the lease area and monitoring is being carried out by MoEF/PCB approved external laboratory and reports submitted to the regional office of the MoEF quarterly. No adverse impact is observed in any of the parameters monitored so far. Enclosed observation well's location map as Annexure - 6 and monitoring reports as Annexure -10 .
17	The fresh water gradient towards the sea will be maintained by close monitoring of water table. Piezometer wells to be constructed and monitored.	11 Nos. of open wells and 7 Nos. of Piezometer wells are provided and ground water level & quality monitoring is being carried out. Enclosed well details and monitoring data as Annexure - 10 & 11 .
18	Mining shall be carried out by permitted methods without the use of any forms of blasting. Use of explosives for blasting is prohibited. The mining should be stated near sea side and mining should be progressed parallel to sea coast so that inland water table is not disturbed.	No blasting is carried out. The mining was started near sea side and mining is progressing parallel to sea coast so that inland water table is not disturbed.
19	Radiation survey shall be carried out as stipulated by the Atomic Minerals Directorate for Exploration and research, Department of Atomic Energy, Government of India to ascertain the effects of radioactive minerals.	Radiation survey is carried out at locations as per the directive of the Atomic Energy Regulations Board (AERB), DAE to ascertain the effects of radioactive minerals and reports submitted periodically (Annexure -12)
20	Occupational health and safety measures, especially concerning radiation hypertension, diabetes etc, should have health check-up once in six months.	Occupational health checkup and safety measures, especially concerning radiation hypertension, diabetes etc. is carried out by company appointed Doctor once in six months and records are maintained.
21	The project proponent shall obtain Consent to Operate from the State Pollution Control Board, Andhra Pradesh and effectively implement all the conditions stipulated therein.	Consent to Operate is obtained from the State Pollution Control Board, Andhra Pradesh vide Consent Order No: APPCB/VSP/VZM/152/HO/CFO/2015 Dt: 30.10.2015 (Annexure -13) and is valid up to 31.05.2018.
22	Implementation of conditions laid down in the Mining Plan along with progressive Mine Closure Plan which has been approved by Indian Bureau of Mines,	Implemented Mining Plan conditions along with Progressive Mine Closure Plan, which has been approved by Indian

	Ministry of Mines vide Letter No. AP/SRK/MP/Garnet-2/Hyd dated 26.09.2003 and 18.06.2009.	Bureau of Mines vide letter no. AP/SRK/MP/Garnet-2/Hyd. dated 26.09.2003, 18.06.2009 & 23.09.2014 and Modified Mining Plan approval vide letter no. AP/SRK//MP/Garnet-Sillimanite-7/Hyd. dated 02.03.2017 (Annexure -14)
23	Implementation of conditions laid down in the Mining Plan which has been approved by atomic Minerals directorate for Exploration and Research, Department of Atomic Energy vide Letter No, AMD/MPA/3M/TRIMEX/03,dated December 08,2003 and Mining scheme approval vide no. AMD/MPA/3M/TSPL/720ha/2009 dated 17.08.2009.	Mining Plan conditions are being implemented as approved by Atomic Minerals Directorate for Exploration and Research, Department of Atomic Energy vide letter no. AMD/MPA/3M/TRIME/03, dated 08.12.2003 and Mining Scheme approval vide no. AMD/MPA/3M/TSPL /720ha/2009 dated 17.08.2009 and vide no. AMD/MRG/TSPL/SM/ /720ha/2014 dated 15.05.2014.
24	Implementation of the Conditions, if any, as laid down by Andhra Pradesh State Coastal Zone Management Authority.	All conditions as stipulated by the Andhra Pradesh State Coastal Zone Management Authority are implemented (Annexure -15)
25	Effective safeguard measures such as conditioning of material with water, regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and transfer points. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	In dry plant, ambient dust is arrested from the generating points by dust extraction system consisting of de-dusting mechanism, cyclone and bag filters etc. Water sprinklers are installed at MSP rejects discharge point and water tankers are deployed for haul road wetting. Ambient Air Quality monitoring is being carried out in 11 locations through an external laboratory and the parameters are within the permissible limits. Ambient air quality monitoring reports are enclosed as Annexure -16 .
26	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(At least four times in a year-pre-monsoon(April-May),monsoon (August), post-monsoon(November)and winter(January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment, Forests & Climate Change and its Regional Office Chennai, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity necessary	Ground water monitoring is being carried in 11 Nos. of observation wells situated within and outside the mining lease area. In addition, 7 Nos. of piezometers are also installed in the mining lease area and water table, salinity, pH, TDS etc are monitored. It is observed that there is no depletion in ground water table or negative change in the quality of water. Details are submitted to all authorities as directed. Annexure -17 .

	corrective measures shall be carried out.	
27	The project proponent shall ensure that no natural watercourse and /or water resources shall be obstructed due to any operations.	No natural nalla or water course is passing through the mining lease area.
28	Regular monitoring of water quality upstream and downstream of adjoin water bodies shall be carried out an record of monitoring data should be maintained and submitted to Ministry of Environment,. Forests & Climate Change its Regional office, Chennai, Central Ground water Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.	No water body (except sea) is available within or adjacent to the mining lease area. However, water monitoring is done in a village pond situated near the mining lease area and no adverse impact of any nature is found so far. (Annexure -18)
29	As part of ambient air quality monitoring during operational phase of the project, the air samples shall also be analyzed for their mineralogical composition and records maintained.	As part of the Ambient Air Quality Monitoring, air samples are analyzed for their mineralogical composition. Enclosed report as Annexure -16 .
30	Compliance status shall be submitted to the Ministry of Environment, Forests & Climate Change its Regional office, located at Chennai on six monthly basis.	Compliance status is being submitting on six monthly basis to RO, Chennai. Last report was submitted vide letter No. TSPL/MIN/MoEF/ENV/17-18/1084 dated 30-06-2017 Annexure -19 .
31	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	In dry plant, ambient dust is arrested from the generating points by dust extraction system consisting of de-dusting mechanism, cyclone and bag filters etc. Water sprinklers are installed at MSP rejects discharge point and water tankers are deployed for haul road wetting. Ambient Air Quality monitoring is being carried out as per norms prescribed by the CPCB. Report as Annexure -16 .
32	Vehicular Emissions shall be kept under control and regularly monitored. Vehicles used for transportation of ores and other shall have valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. The vehicles shall be covered with a tarpaulin and shall not be over loaded.	Vehicular Emissions are kept under control and regularly monitored. Vehicles used for transportation of ores are having valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. The ore carrying vehicles are covered with tarpaulin and not over loaded.
33	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment and Forests and its Regional Office, Chennai.	Will be complied as per the directive.
34	Implementation of Action plan on issues rose during Public Hearing as committed by the project proponent during the public hearing shall be implemented and the report shall be submitted to the Regional Office of the Ministry every year.	All the commitments made during the public hearing are being implemented. Report submitted as Annexure-20 , CSR expenditure incurred during the year 2017-18 (up to September, 2017) is

		enclosed as Annexure -21.
35	During initial mining stages, a green belt of 7.5m barrier all around the mine lease boundary shall be made. Subsequently to develop 50m barrier zone with 5-tier plantation inside mine lease in a progressive way near the active mining sites. Adequate plantation shall be raised in the ML area, haul roads, vacant area etc. Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. The density of the trees shall not be less than 2500 plants per ha. The company shall involve local people with the help of self-help group for plantation programme. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the Regional Office of the Ministry every year.	A green belt of 7.5m barrier along the ML boundary has been taken up wherever mining has been completed and also it is continuing. Beyond 7.5m also, plantation is carried out covering entire mined out & backfilled lands. Afforestation is being carried out with in-house nursery saplings and also saplings as advised by the forest dept. Density of plantation is more than 2500 plants per Ha. Details of plantation carried out, extent of land covered and green belt developed during the year 2017-18 (up to September, 2017) is attached as Annexure -22
36	Adequate air monitoring stations shall be installed in areas of human habitations near the mine and the results of ambient air quality shall be maintained and regularly submitted to the Regional Office of the Ministry. The monitored data for criteria pollutants shall be regularly uploaded on the company's website and also displayed at project site.	Out of the 11 AAQ monitoring stations, 4 stations are located near the habitations and the AAQ monitoring is carried out regularly through approved external laboratory. The levels are within the permissible limits. Enclosed reports Annexure-16 & photo as Annexure -23.
37	The waste water from the mine shall be treated to conform to the prescribe standards before discharging in to the natural stream. The discharged water shall be regularly monitored and report submitted to the Ministry of Environment & Forests, Central Pollution Control Board and the State Pollution Control Board.	No water from the mine or plant is discharged into any natural stream. Water used for mineral concentration is pumped to the mined out pit along with tailings for back filling and water is recovered back to the plant through water treatment plant/thickeners for recycling purpose.
38	A final mine closure plan, along with other details shall be submitted to the Ministry of Environment & Forests, 5 years in advance of final mine closure for approval.	Will be complied.

B. General Conditions:

S. No	Condition	Compliance
1	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	There is no change in the mining technology and scope of working.
2	No change in the calendar plan including excavation, quantum of beach sand mineral i.e. Ilmenite, Rutile, Zircon, Monazite and Garnet and waste should be made.	There is no change in the calendar plan including RoM excavation, quantum of beach sand minerals produced i.e. Ilmenite, Rutile, Zircon, Sillimanite and Garnet and waste produced. Details of production of RoM, minerals and waste during three financial year against

		approved mining plan quantities are enclosed as Annexure-24 .
3	At least four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 micron i.e. PM ₁₀) and NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board/Central Pollution Control Board once in six months.	The AAQ is monitored in the core as well as in the buffer zone at 11 locations through external approved laboratory for PM ₁₀ and PM _{2.5} and NO _x . The parameters are within the permissible limits. The location of the AAQMS were decided in consultation with State Pollution Control Board based on the meteorological data, topographical features and environmentally and ecologically sensitive targets. The frequency of monitoring is carried out as directed by the SPCB in their consent. Enclosed AAQM reports as per Annexure-16 .
4	Measures should be taken for control of noise levels below 85 db in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs.	Noise monitoring being carried out at 10 locations through external laboratory and the levels are within the permissible limit. Enclosed reports as Annexure-25 Workers engaged in HEMM operation are provided with ear muffs.
5	There will be zero waste water discharge from the plant.	The water used for mineral processing activities is pumped into the mined out pit along with the tailings in the form of slurry and no waste water is discharged outside. For the toilets and canteen waste water, septic tanks and soak pits are provided.
6	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.	Personnel working in dusty areas are provided with personnel protective equipment. Details of the PPE issued, during the last half year period is enclosed as Annexure -26 .
7	Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Occupational health surveillance programme of the workers is being carried out regularly as per the requirements stipulated in Mines Act and records are maintained.
8	A separate environmental management cell with suitable qualified personal should be should be set up under the control of a Senior Executive, who will report directly to the Head of the Organization.	Separate environment management cell with qualified person under the control of Senior Executive is provided. Monitoring of environmental parameters is done through external MoEF/PCB approved laboratory.



9	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Chennai.	Adequate fund for environment management activities is provided and it is kept in a separate account and also not diverted for any other purpose. Year wise expenditure is reported to RO, Chennai. Recurring expenditure incurred during the financial year 2017-18 (up to September, 2017) is given as Annexure-27 .
10	The project authorities should inform to the Regional Office located at Chennai regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Informed to RO, Chennai regarding EC/CRZ approvals vide our letter dated 05.05.2015. Also intimated the RO about final approval for the project i.e. CFO dated 30.10.2015 for the project vide our letter dated 28.11.2015.
11	The Regional Office of this Ministry located at Chennai shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation the officers(s) of the Regional Office furnishing the requisite data/information/monitoring reports.	Being complied.
12	The project proponent shall submit six monthly reports on the status compliance of the stipulated environmental clearance conditions including results of monitored data ((both in hard copies as well as by e-mail) to the Ministry of Environment, Forests & Climate Change , its Regional Office Chennai, the respective Zonal Office of Central Pollution Control Board and State Pollution Control Board. The Proponent shall upload the status of compliance of the environmental clearance conditions including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment, Forest 7 Climate Change Chennai, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.	Six monthly compliance reports in hard and soft copy is submitted to the Regional Office, Chennai and the reports are uploaded on the company website periodically.
13	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Prishad/Municipal Corporation, urban Local Body and the Local NGO, If any from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	A copy of EC was sent to local panchayat vide our letter dated 30.04.2015 Annexure-28 . The clearance letter also was put on the website of the company.

14	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/Tehsildar's Office for 30days.	A copy of EC was sent to State Pollution Control Board's Regional Office, District Industry Centre and the District Collector's office vide our letter dated 30.04.2015 Annexure-29 . The clearance letter also was put on the website of the company.
15	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry of Environment, Forests & Climate Change, Chennai by e-mail.	The Form-V is submitted to RO regularly and uploaded on the company website. Copy of same for the period 2016-17 is enclosed as Annexure-30 .
16	The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forests & Climate Change at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Chennai.	We had given an advertisement in two local newspaper and submitted copies of the same to RO, Chennai vide our letter dated 05.05.2015.



26 July 2017

The Director (Non-Coal Mining)
Ministry of Environment, Forests and Climate Change (MoEF),
Government of India,
Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj
New Delhi - 110 003

Respected Sir,

Sub: Environmental Clearance (EC) for the expansion of Srikurmam Heavy Mineral Sand Mine (from 2.0 MTPA to 6.0 MTPA) of M/s Trimex Sands Pvt. Ltd. at Vatsavalasa & Tonangi Villages in Gara Mandal, Srikakulam District, Andhra Pradesh (720 Ha).,

Remittance of budgeted amount for the implementation of Wildlife Conservation Plan by the Forest Department - Regarding...

Ref:

1. Environmental Clearance received by MoEF, New Delhi vide Letter No.J-11015/175/2011-IA.II (M) dated 17.04.2015.
2. Trimex representation on 20.05.2015
3. Trimex representation dated 19.01.2016
4. Trimex representation dated 20.04.2017

With reference to the above subject matter, we wish to inform you that, we have been instructed under specific condition point no (ii) of Environmental Clearance (Ref.1) to deposit Rs.1.80 crores budget in one go to the Forest Dept. for implementation of Wildlife Conservation Plan within one month of issue of EC.

In this regard, we requested MoEF, New Delhi for allowing us to deposit year wise approved amount in the month of April of each financial year in advance for the implementation of Wildlife Conservation Plan vide our letter dated 20.05.2015, 19.01.2016 & 20.04.2017.

Meanwhile, the Divisional Forest Officer, Srikakulam had instructed us to deposit entire amount of Rs.180.40 Lakhs in one go to the Forest Dept. vide Rc.No.1316/2015-A1, dated 16.06.2017.

Accordingly, we have complied and deposited the entire amount of Rs.180.40 lakhs as budgeted in the approved Wildlife Conservation Plan to the Forest Dept. vide our letter dated 12.07.2017 (Annexure-1).



Since we have already complied the specific condition point no (ii) as mentioned in the Environmental Clearance, therefore our request for the amendment of the same vide Ref. 2, 3 & 4 may be treated as withdrawn.

This is for your kind consideration please.

Thanking you,

Yours Sincerely
For M/s Trimex Sands Pvt. Ltd.,


Deepak Rathod
General Manager (Technical Services)



Enc: Trimex letter to PCCF, Guntur dated 12.07.2017

TRIMEX

12 July 2017

The Principal Chief Conservator of Forests (WL) &
Chief Wildlife Warden,
Aranya Bhavan, Sankurathri Residency,
Agathavarappadu, Mahatma Gandhi Inner Ring Road,
Peda Kakani Mandal, Guntur - 522509,
Andhra Pradesh,

Respected Sir,

Sub: Approved Wildlife Conservation Plan - Expansion of Srikurmam Heavy Mineral Sand Project of Trimex Sands Pvt. Ltd. - Remittance of budgeted amount for interventions to the Forest Department - Regarding...

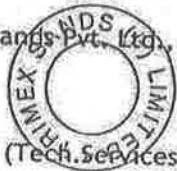
- Ref: 1) Wildlife Conservation Plan approved vide R.C.No.22899/2013 NVL-3 dated 11.11.2014
2) Principal CCF, AP Letter No. Rc No. 22899/2013/WL-3 dated 20.04.2015
3) Our letter dated 16.06.2015
4) Letter from PCCF vide RC.No.22899/2013/WL-3 dated 12.04.2017
5) Letter from DFO vide Rc.No.2398/2016/A4 dated 27.04.2017
6) Letter from PCCF vide Rc.No.22899/2013/WL-3, dated 24.05.2017
7) Our letter dated 09.06.2017
8) Letter from DFO vide Rc.No.1316/2015-A1, dated 16.06.2017
9) Our letter dated 22.06.2017

With reference to above subject, we wish to inform you that we have complied and deposited the entire amount of Rs.180.40 lakhs as budgeted in the Wildlife Conservation Plan approved vide reference (1) in account of BIOSAP, Andhra Bank, Secretariat Branch, Hyderabad as furnished below.

Sl. No.	Cheque No.	Date	Amount (in Rs.)
1	CNAAEASFM1	10.07.2017	Rs.85,40,023.60/-
2	CNAAEARUA7	10.07.2017	Rs.95,00,023.60/-
Total (in Rs.)			Rs.180,40,047.20/-

The copy of receipt of e-payment is attached as Annexure-1.
We request you to kindly acknowledge the receipt of the same.

Thanking you,
Yours Sincerely
For M/s Trimex Sands Pvt. Ltd.,
Deepak Rathod
General Manager (Tech. Services)



Encl : as above

- CC: 1) The Chief Conservator of Forests, Vishakapatnam Circle, Vishakapatnam
2) The DFO, Forest Dept. Govt. of Andhra Pradesh, Srikakulam
3) The Forest Range Officer, Srikakulam

F.No.11-67/2013-IA-III

Government of India

Ministry of Environment, Forest & Climate Change
(IA.III Section)Indira Paryavaran Bhawan,
Jor Bagh Road,
New Delhi - 110 003Dated: 28th April, 2015

To

M/s Trimex Sands Pvt. Ltd.,
Vatchavalsa (V), Gara Mandal, Srikakulam Dist.,
Andhra Pradesh - 532 404**Subject: Expansion of Srikurmam Heavy Mineral Sand Project at Vatsavalasa & Tonangi Villages in Gara Mandal in Srikakulam District, Andhra Pradesh by M/s Trimex Sands Pvt. Ltd. - CRZ Clearance -Reg.**

Sir,

This has reference to your proposal forwarded by the Special Chief Secretary to Govt. of Andhra Pradesh, Environment Forests Science and Technology Department, Andhra Pradesh vide letter no. 6613/ENV/CZMA/ 2013 dated 15.02.2014 and your letter dated 12.11.2014 seeking prior CRZ Clearance on the above-mentioned project.

2. The Ministry of Environment, Forest & Climate Change has considered the application. It is noted that the proposal is for grant of CRZ Clearance for **Expansion of Srikurmam Heavy Mineral Sand Project at Vatsavalasa & Tonangi Villages in Gara Mandal in Srikakulam District, Andhra Pradesh by M/s Trimex Sands Pvt. Ltd.** The proposal was considered by the EAC in its meeting held on 30th June, 2014 - 2nd July, 2014. The proponent has informed that:

- i. The proposal is for expansion of Mineral Sand Mining from 2 MTPA to 6 MTPA & Mineral Sand production from 0.63 MTPA to 0.93 MTPA. Mine lease area is 7.20 Sq. Km for mining of heavy mineral sand having Ilmenite, Rutile, Zircon, Garnet, Sillimanite & 59.27 Ha Plant Area located at Vatsavalasa & Tonangi Villages, Gara Mandal, Srikakulam District, Andhra Pradesh.
- ii. The State Govt. of Andhra Pradesh has granted a mining lease for mining of heavy mineral sand having Ilmenite, Rutile, Zircon, Garnet, Sillimanite minerals from 23.02.2004 to 22.02.2034 in 7.20 Sq.Km area at Vatsavalasa & Tonangi Villages, Gara Mandal, Srikakulam District, Andhra Pradesh. The Ministry of Environment & Forest has granted Environmental and CRZ clearance for the project for 2.0 MTPA. The project proponent has submitted application for expanding mining capacity from 2.0 MTPA to 8.0 MTPA, in July 2011.
- iii. The proposal was considered by the Committee to determine Terms of Reference (TOR) during 19th meeting of EAC held during 21st - 23rd September 2011. It was decided that a sub Committee of EAC may undertake a site visit before making recommendations for TOR.
- iv. The project was further considered by EAC in its 23rd meeting held during January 23 - 25th 2012 wherein the project proponent made a request to



allow them to start collecting environmental data for the purpose of preparing the EIA/EMP Report pending visit of sub committee. The matter was placed before the EAC for their consideration. After deliberating the matter, the Committee agreed that the proponent may be allowed to collect baseline data for preparation of EIA/EMP report for the forthcoming pre-monsoon season 2012.

- v. A duly constituted Sub-Committee of the Expert Appraisal Committee from MoEF visited the project site on 17th March 2012 and inspected the project activities and also went through the compliances of the existing Environmental Clearance conditions submitted by the project proponent.
- vi. MoEF has issued the Terms of Reference (ToR) for undertaking detailed EIA study in accordance with the provisions of the EIA Notification dated September 2006 vide Lr.No J - 11015/175/2011 - IA.II (M) dated 6th July 2012.
- vii. In due course, the project proponent has decided to reduce the capacity of expansion from 8.00 MTPA to 6.00 MTPA due to technical and market issues. In this regard, the PP got the permission from MoEF for downscaling the earlier proposal of expansion from 8.0 million tons per annum to 6.0 million tons per annum vide letter No. J-11015/175/2011-IA.II (M) dated 09.09.2013.
- viii. The TOR issued by MoEF is complied and the point-wise compliance status is included in the Final EIA report submitted to MoEF on 18.02.2014. The point-wise compliance of TOR issued by MoEF was addressed by the PP and discussed in detail during the meeting The Regional Office of the MoEF, Bangalore has certified compliance of the existing EC conditions and the same is submitted along with the Final EIA.
- ix. The Mine lease area is 7.20 Sq. Km & Plant area is 59.27 Ha situated outside ML area. There is no forest land in the lease area. Scheme of Mining for a further period of five years from 2009-2010 to 2013-2014 was approved by the Indian Bureau of Mines vide letter no AP/SRK/MP/Garnet-2/Hyd dated 18/6/2009 and by Atomic Minerals Directorate for Exploration and Research (AMD) by vide letter no AMD/MPA/3M/TSPL/720Ha/2009 dated 17.08.2009. The latest mining plan for the project is approved by AMD vide letter no AMD/MRG/TSPL/SM/720Ha/2014 dated 15.05.2014.
- x. It is reported by the Project Proponent (PP) that the mine working will be opencast mechanized mining method involving dry mining and dredging. No drilling and blasting or sorting of the material at mine site are necessary. Run-off mine ore will be mined and concentrated with advanced environmental friendly equipment's and technology, wherein ore mining, concentration, backfilling and afforestation on reclaimed land takes place simultaneously, thus limiting the gap between mining and rehabilitation to pre-mining stage to only a few months.
- xi. Mined/dredged heavy mineral sand is screened, slurried and pumped to a pre-concentration plant where latest imported equipment's to concentrate minerals in the ROM into three to four mineral rich concentrates. The concentrates from the Plant will be further transported to a Mineral Separation plant for separation of individual minerals.
- xii. Heavy mineral sand from lower layer having high slime content will be additionally cleaned in a cleaning plant before it is pumped to the Plant. The excavated area will be simultaneously refilled with tailings generated from pre-concentration plant and afforested with local suitable plant species and make the ecological balance of the area.

- xiii. It is reported by the PP that total Mineral Reserves are about 27.98 million tonnes with mineral resources 37.45 million tonnes. Life of the mine is about 8 years.
- xiv. It was reported by the PP that solid waste generation will be about 22.958 million tonnes of silica sand which form the reject quantity during the first five years when 27.65 million tonnes of ROM will be handled. The plant waste/tailings contain shells, silica & silt/slime and this waste sand will be dewatered by cyclones. The tailings which form about 83% of ROM will be transported/pumped back for refilling the mined out areas and subsequent afforestation.
- xv. The total water requirement for the project is estimated as 750 m³/hr. The project proponent already holds permission to draw 500 m³/hr from the Vamsadhara River. The Department of Irrigation, Government of AP has already recommended the additional quantity of 250 m³/hr.
- xvi. It was reported by project proponent that mining will be carried out below the ground water table, however no mine dewatering is involved. A comprehensive hydrogeological study carried out by Andhra University is submitted along with Final EIA.
- xvii. It was reported by the project proponent that there is no wildlife sanctuary/tiger reserve/national park, etc within the 10 km radius area around the mine lease. Schedule I species i.e Olive Ridley Turtle is found the study area. A detailed conservation & intervention plan is prepared and submitted by project proponent along with final EIA & EMP Report.
- xviii. Baseline studies were carried out during summer season 2012. All the parameters for air, water, and noise quality were reported to be within prescribed standards. The study on the impact of the mining on Olive ridly turtle, traffic, ground water, flora & fauna etc are also carried out and submitted along with final EIA. HTL/LTL demarcation by authorised agency also carried out and report submitted.
- xix. It was informed by the project proponent that the Public Hearing for the project was conducted on 29.12.2012 near Project site. The Public Hearing was chaired by District Collector, Srikakulam. The issues raised during public hearing are considered and discussed in the final EIA. It was informed by Project Proponent that as per the villagers requirements, they would take care of local employment; health issues, providing education and assistance in vocational training etc.
- xx. The Andhra Pradesh Coastal Zone Management Authority (APCZMA) has recommended the project vide letter No. 6613/ENV/CZMA/ 2013 dated 15.02.2014
- xxi. The cost of the project is Rs 140 Crores. Capital budget for environmental protection measures is Rs. 1064.00 lakhs and annual recurring cost is Rs.1616 lakhs after expansion.
- xxii. There is no court case against the project.

3. The EAC in its meeting held on 30th June, 2014 – 2nd July, 2014 observed that the block has a long patch of forest between the proposed mining area and the HTL. The project proponent has proposed a depth of mining to a depth of nine meters based on the international and also some practices being followed at the project in Orissa.

4. The project proponent indicated that he has an approved mining plan from the Mining Dept while the approval from IBM is under process. The CRZ EAC being a Committee for protection of coastline of the country is really



concerned about mining practices which involve excavation, whether manual or mechanical with such depth upto 9 meter, and its impact on the GW and coastline. Even though the activity is beyond the 100 HTL, the PP has indicated that the excavated areas will be backfilled and there will be buffer of 15 m between the excavation area and the forest area. The Committee was of the view that it should get the clear guideline from the MOEFCC who may like to consult with the IBM and Atomic Minerals Division. whether such proposals with depth of excavation of such range are to be recommended. While examining this case the MOEFCC may also like to go through the SCZMA recommendations imposed on the proponent regarding the proposal.

5. The project was re-examined by the EAC in its meeting held on 28th - 30th January, 2015 and the project proponent informed that:

- i. Mining Plan Approval obtained from Competent Authorities such as AMD vide letter No. AMD/MRG/TSPL/SM/720 Ha/2014 dated 15.05.2014 and Indian Bureau of Mines (IBM) vide letter No. AP/SR/MP/Gar-7/Hyd dated 23.09.2014. The depth up to 9 m has been permitted by AMD, IBM.
- ii. There are no sand dunes and forest area in the project site
- iii. There is no wildlife sanctuary/tiger reserve/national park, etc within the 10 km radius area around the mine lease. Further Andhra University is carrying out monitoring studies every year since 2009. The report from 2009 to 2012 submitted establish that the beaches have little potential for Schedule I species i.e. Olive Ridley Turtle. The AU report and detailed conservation & intervention plan is prepared and submitted along with final EIA & EMP Report.
- iv. It is noted that in similar mining in Kerala. IBM vide letter No. M.11013/34/MoEF(SZ)/2014-CCOM dated 02.12.2014 communicated that Heavy Minerals availability has been proved up to depth of 8m and dredge mining is permitted up to this depth below the MSL in the approved mining Plan.

6. The EAC in its meeting held on 28th - 30th January, 2015, after deliberation recommended for grant of CRZ Clearance. The Ministry of Environment, Forest & Climate Change hereby accords CRZ Clearance for the above-mentioned **Expansion of Srikurmam Heavy Mineral Sand Project at Vatsavalasa & Tonangi Villages in Gara Mandal in Srikakulam District, Andhra Pradesh by M/s Trimex Sands Pvt. Ltd.** under the provisions of the Coastal Regulation Zone Notification, 2011 and amendments thereto and Circulars issued thereon and subject to the compliance of the following specific conditions, in addition to the general conditions mentioned below:

7. **SPECIFIC CONDITIONS:**

- (i) "Consent to Operate" shall be obtained from State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of mining work at the site.
- (ii) The Project Proponent should obtain the NOC/Clearance from the Competent Authority, as applicable, with regard to conservation and management plan on Ridley Turtle.
- (iii) Soil conservation measures shall be prepared and implemented.

- (iv) The mined out pits shall be refilled with the sand only. The Ground Water Authority shall ensure that all the mined out pits are refilled concurrently. Site photographs shall be submitted before and after the mining activity to Regional Office of MoEF.
- (v) All the conditions/recommendations as stipulated by the Andhra Pradesh Coastal Zone Management Authority (APCZMA) vide letter No. 6613/ENV/CZMA/ 2013 dated 15.02.2014, shall be complied with.
- (vi) The Mining shall be in accordance with the Mining plan approved by AMD and IBM.
- (vii) The Project Proponent shall co-ordinate with the Directorate of Fisheries in respect of providing access to Beach for fishermen.
- (viii) Ground water on landward side of the mining area shall be carried out before, during and after mining so as to check the possible impact/ sea water intrusion.
- (ix) Plantation shall be carried out on the mined out area, as committed.
- (x) Ground water observatory wells shall be within and outside the mining area prior to the mining for ground water monitoring. Project Proponent shall carry out soil analysis, ground water analysis at the site once in three months and submit the same to the State Pollution Control Board and Regional Office, MoEFCC.
- (xi) Digital processing of the entire mining lease area using remote sensing technique should be carried out regularly once in three years for monitoring land use pattern and physiographic of the area and report submitted to the Regional Office, MoEFCC.
- (xii) No drilling and blasting should be involved.
- (xiii) There shall be no ground water drawal in CRZ area.
- (xiv) There shall be no mining in intertidal zone.
- (xv) To control dust during transportation water sprinklers shall be adopted and also the sand transport vehicles shall be covered with Tarpaulin sheets.
- (xvi) TCLP analysis of both mined and tail materials can be done to check the presence of Hazardous materials and report shall be submitted along with the six monthly monitoring reports.
- (xvii) A green belt shall be developed after mining and refilling block by block.
- (xviii) Project proponent shall ensure that no disturbance is caused to the mangroves/fisherfolk.
- (xix) All the commitments made during the public hearing including the budget for corporate social responsibility shall be earmarked for carrying out the activities.
- (xx) Mineral processing plant shall be located outside CRZ area.



- (xxi) Safety measures shall be taken for workers to prevent radioactive impact on health. All the safety regulations as applicable shall be strictly followed.
- (xxii) All prior statutory clearances from Department of Atomic Energy, Indian Bureau of Mines, Central and State agencies as applicable shall be obtained.
- (xxiii) Sand dunes should not be flattened.

GENERAL CONDITIONS

- (i) A copy of the clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
 - (ii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.
8. Officials from the Regional Office of MoEF&CC, Chennai who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF&CC should be forwarded to the CCF, Regional office of MoEF&CC, Chennai.
9. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.
10. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
11. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
12. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.
13. The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forests & Climate Change at <http://www.envfor.nic.in>. The advertisement should be made within

Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Chennai.

14. This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation v/s. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

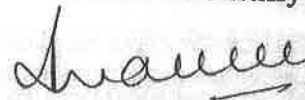
15. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

16. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

17. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

18. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.

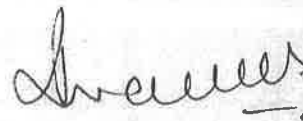
Yours faithfully,



(Dr. Ranjini Warriar)
Director

Copy to:

1. Chairman, Andhra Pradesh Coastal Zone Management Authority & Special Chief Secretary to Govt., E.F.S & T. Dept., Secretariat, Hyderabad- 500 002
2. The Chairman, CPCB, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32.
3. The Chairman, Andhra Pradesh Pollution Control Board, Paryarana Bhawan, A-III, Industrial Area, Sanathnagar, Hyderabad - 500 018, Andhra Pradesh.
4. The CCF, Regional Office, MoEF&CC(SZ), Kendriya Sadan, IVth floor, E&F wings, 17th Main Road, Koramangala II Block, Bangalore - 560 034.
5. Guard File.
6. Monitoring Cell.



(Dr. Ranjini Warriar)
Director



परमाणु
ऊर्जा
नियामक
परिषद



भारत सरकार

GOVERNMENT OF INDIA

Atomic
Energy
Regulatory
Board



अध्यक्ष
CHAIRMAN

LICENCE FOR OPERATION

(For Type II and IV Beach Sand Minerals Facilities)

Licence Number	AERB/IPSD/BSM Licence/Trimex/65A/2014 /2749	Issuance Date	August 19, 2014
		Expiry date	August 19, 2019

In exercise of the powers conferred under sections 16 and 17 of the Atomic Energy Act, 1962 read in conjunction with Rule 3 of the Atomic Energy (Radiation Protection) Rules, 2004 and the Atomic Energy Regulatory Board (AERB) notification S.O. 1210 dated 24th April 2009 on Beach Sand Minerals (BSM) processing facilities, AERB hereby grants the Licence in favour of The Director CUM CEO, M/s Trimex Sands Pvt. Ltd., Srikakulam hereinafter referred to as the Licensee to operate the facility of M/s Trimex Sands Pvt. Ltd., Vatsavalasa, Gara Mandal, Srikakulam, Andhra Pradesh for mineral separation which normally results in generation of tailings with monazite content more than 5%.

The licensee is responsible for,

- Ensuring compliance with the relevant provisions of the
 - Atomic Energy Act, 1962;
 - Atomic Energy (Radiation Protection) Rules, 2004;
- Safe disposal of monazite enriched tailings;
- Radiological safety of workers, public and environment;
- Submission of quarterly and annual health physics reports to AERB;
- Compliance with the conditions, as applicable, and stated overleaf.


Competent Authority

Shri CVGK Murty
M/s Trimex Sands Pvt. Ltd.
Vatsavalasa (V), Gara Mandal
Srikakulam Dist.
Andhra Pradesh – 532 404

एस. एस. बाजाज / S. S. BAJAJ
अध्यक्ष / Chairman
परमाणु ऊर्जा नियामक परिषद
Atomic Energy Regulatory Board



नियामक भवन, अणुशक्ति नगर, मुंबई - 400 094
NIYAMAK BHAVAN, ANUSHAKTI NAGAR, MUMBAI - 400 094

दूरभाष / TELEPHONE : 01-22-2556 2343, 2599 0604
फैक्स / FAX : 01-22-2556 2344, 2556 5717, 2556 3230
E-mail: chairman@aerb.gov.in
वेबसाइट / WEBSITE : www.aerb.gov.in

ISO 9001:2008
Organisation

Annexure

Conditions of Licence for M/s Trimex Sands Pvt. Ltd., Vatsavalasa, Gara Mandal,
Srikakulam, Andhra Pradesh

1. The employer shall ensure that provisions of the Atomic Energy (Radiation Protection) Rules, 2004 are implemented.
2. Duly qualified Radiological Safety Officer (RSO) approved by Atomic Energy Regulatory Board (AERB) shall be available at the site and shall be provided with requisite facilities to discharge his duties and functions.
3. Records of quantity and monazite content in the raw material, products and monazite enriched tailings shall be maintained.
4. Monazite enriched tailings shall be disposed in trenches within plant premises under institutional control and topped with silica rich sand. The employer shall ensure that sufficient trenches are available for the disposal of tailings to be generated during the license period and there is no enhancement in the natural radiation background of the tailings disposal area.
5. Appropriate records of radiological monitoring of personnel, workplace, plant premises including tailings disposal area, mining area shall be maintained.
6. Transport of monazite enriched tailings shall be in accordance with the guidelines prescribed by the AERB.
7. Quarterly and Annual Health Physics Report shall be sent to AERB in the prescribed format.
8. Full facilities shall be accorded to authorised representative(s) of AERB to inspect the installation at any time.
9. The employer shall comply with all the recommendations made by AERB with respect to radiological safety.
10. Any changes in the information listed in the application shall be intimated forthwith to AERB.
11. The license shall not be transferred without prior approval of AERB.
12. Application for renewal of license as per the prescribed format shall reach AERB before 180 days of the date of expiry.
13. Any plan for decommissioning of the facility shall be intimated forthwith to AERB.

This license may be suspended/or cancelled, if any declaration made or information given in the application thereof is found to be false or if any undertaking given in such application is not carried out.

GOVERNMENT OF ANDHRA PRADESH
ABSTRACT

Water Resources Department - Industrial Water Supply - SLSWCC -
Renewal Permission to draw 0.14 TMC of water per annum from the
Vamsadhara River in favour of M/s. Trimex Sands Pvt. Ltd., at Vatsavalasa
(V), Gara (M) of Srikakulam District for a further period of 10 years for
consumptive use - Accorded - Orders - Issued.

WATER RESOURCES (REFORMS) DEPARTMENT

G.O.Ms.No.103.

Dated:24-09-2015.

Read the following:-

- 1) G.O.Ms.No.71, 1&CAD(PW:Reforms) Deptt., dt:21-01-2007.
- 2) From the E.N.C.(Irr.), Hyd., Lr.No.ENC(I)/DCE.DW/OT.5/AEE17/
Trimex Industries, dated:25-03-2015.

>><<

ORDER:

In the reference 1st read above, Government have accorded permission to M/s.TRIMEX Industries Limited to draw 0.14 TMC of water from the Vamsadhara River near Vatsavalasa(V), Srikakulam District for a period of five years subject to payment of water charges @ Rs.5.50/1000 gallons for consumptive use. However, agreement for water drawl was concluded by M/s. Trimex Sands Private Limited, Vatsavalasa (V), Gara(M) of Srikakulam District with Superintending Engineer, Irrigation Circle, Bobbili vide agreement No.28SE/2009-10, dated:16-6-2009 and expired on 15.06.2014.

2. In the reference 2nd read above, the Engineer-in-Chief(Irrigation), Hyderabad has submitted proposals for renewal permission to draw 0.14 TMC of water from Vamsadhara River for a further period of 10 years from 16.06.2014 to 15.06.2024 in favour of M/s.Trimex Sands Private Limited, Vatsavalasa (V), Gara(M) of Srikakulam District, taking into account on change of name as per G.O.Ms.No.10, Industries & Commerce(M-III) Department, dated:17-01-2007 and Registrar of Companies, A.P. Certificate, dated:11-4-2007.

3. Government after careful examination, hereby accord renewal permission for drawl of 0.14 TMC water in favour of M/s. Trimex Sands Private Limited, Vatsavalasa (V), Gara(M) of Srikakulam District from Vamsadhara River for a further period of 10 years from 16-06-2014 to 15-06-2024 for consumptive use with usual terms and conditions subject to payment of water charges @ Rs.5.50/1000 gallons as ordered in the reference 1st read above. The water royalty charges are likely to be revised by the Government from time to time and the industry shall pay the revised rates as fixed by the Government from time to time. The royalty charges on water shall be paid in advance every year.

4. The other conditions as stipulated in the G.O. 1st read above shall also be adhered to.

P.T.O.,

:: 2 ::

5. The Engineer-in-Chief(Irrigation), A.P., Hyderabad shall take necessary action in the matter, accordingly.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

ADITYA NATH DAS,
PRINCIPAL SECRETARY TO GOVERNMENT.

To
The Engineer-in-Chief(Irrigation), I&CAD Department,
Jalasouda Buildings, Errum Munzil, Hyderabad.
The Superintending Engineer, Irrigation Circle, Bobbili - 535 558.
The District Collector, Srikakulam.

Copy to:

The Managing Director, A.P. Pollution Control Board, Hyderabad.
The Commissioner of Industries, Govt. of A.P., Chirag Ali Lane, Hyd.
The P.S. to Hon'ble Minister (WRD).
The P.S. to Principal Secretary to Govt. (WRD).
✓ M/s. Trimex Sands Private Limited, Plot No.56, Telugumusalayya Layout,
Srikakulam District - 532001.
SF/SC.

//FORWARDED :: BY ORDER//

I. S. Srinivasan
SECTION OFFICER.
A-

Back filling



GOVERNMENT OF ANDHRA PRADESH
FOREST DEPARTMENT

Rc.No: 22899/2013/WL-3
Dated: 11.11.2014.

Office of Prl.Chief Conservator of Forests,
Aranya Bhavan, Saifabad, Hyderabad.

Sri A.V.Joseph., I.F.S.,
Prl. Chief Conservator of Forests (HoFF)
Prl. Chief Conservator of Forests (WL) &
Chief Wildlife Warden (A.P.)

Sub: Forest Department – Wildlife – Expansion of Srikurmam Heavy mineral and sand Project of Trimex Sands Pvt Ltd., in Vatsavalasa and Tonangi Villages of Gara (M), Srikakulam District – Wildlife Conservation Plan – Agreed to – Regarding.

Ref: CF, Visakhapatnam Rc.No. 4475/2013/TO (1), dated: 30.10.2014

** ** *

Attention is invited to the reference cited. The Conservator of Forests, Vishakapatnam is informed that the revised Wildlife Conservation Plan submitted by the User Agency (Trimex Sands Pvt. Ltd.), through the Conservator of Forests, Visakhapatnam, vide reference cited with regard to proposed Expansion of Srikurmam Heavy mineral and sand Project of Trimex Sands Pvt Ltd., in Vatsavalasa and Tonangi Villages of Gara (M), Srikakulam District over an area of 7.20 Sq.Kms for a period of 10 years with a proposed cost of Rs.180.40 lakhs is hereby agreed to.

The Conservator of Forests, Visakhapatnam is requested to take action accordingly and keep reporting the developments periodically.

Sd/- A.V.Joseph,
Prl.Chief Conservator of Forests (WL) &
Chief Wildlife Warden

To
The Conservator of Forests,
Visakhapatnam

Copy to the Divisional Forest Officer, Srikakulam

1. Copy to the M/s Trimex Sands Pvt Ltd., Plot No. 56, Telugu Musalayaa Layout, Adithya Nagar, Arasavilli Road, Srikakulam – 532001 Andhra Pradesh

// T.C.B.O.//


Superintendent

Fencing at 100 Mts. from HTL



**Identification and Conservation of
Beach Sand Dunes at TSPL Mine Lease Areas of
Vatsavalasa & Tonangi Villages,
Srikakulam Dist, A.P.**

**For
M/s. Trimex Sands Pvt. Ltd.
Srikakulam**

**By
ENVID Group, Andhra University
Vishakhapatnam
2012
&
M/s Bhavathi Ana Labs Ltd, Hyderabad**



ENVIRONMENT


Department of Environmental Studies
ANDHRA UNIVERSITY
Visakhapatnam - 530 003 - India

Prof. P.V.V. Prasada Rao
Co ordinator

18-10-12

CERTIFICATE

This is to certify that the Study entitled "Identification and Conservation of Beach Sand Dunes at TSPL Mine lease areas of Vatsavalasa and Tonnagi Villages, Srikakulam Dist., A.P." was carried out by the ENVID group of Andhra University, for M/s Trimex Sands Private Ltd., for the purpose of assessing Environmental Impacts.


(P. V. V. Prasada Rao)
Prof. P.V.V. PRASADA RAO
Dept. of Environmental Studies
Andhra University
VISAKHAPATNAM-530 003

PREAMBLE

TSPL has obtained mining lease for mining rare earth placer minerals viz. Ilmenite, Rutile, Zircon, Garnet and Sillimanite over an area of 7.2 Sq Km or 720 ha along the 11.3 km of coastline, in two major blocks/villages viz. Vatsavalasa and Tonangi, Srikakulam Dist separated by a drain that opens in to the sea.

During November 2004, TSPL has obtained Environmental Clearance from the Ministry of Environment and Forests, Govt. of India. Consents for Establishment and Operation were obtained from the AP Pollution Control Board during 2003 and 2007, respectively.

Subsequently, the Govt of India during 2005-2006 has accepted the report of the Expert committee headed by Prof M. S. Swaminathan appointed to carry out a comprehensive review of the CRZ Notification. Its mission was to enable MOEF base its coastal regulations on strong scientific principles and to devise regulations that would meet the urgent need for coastal conservation and development needs.

According to the Prof M S Swaminathan report, Dune-based activities include agriculture, mineral extraction, active and passive recreation etc. The report observes that many such economic activities are site specific such as mining of rare earth minerals, ports and harbors etc and depend upon the infrastructure available along the coastal areas. However, due to stringent provisions of the CRZ notification, several economic activities are affected. The committee has therefore recommended that these development activities including mining of placer minerals and other minerals which are not found elsewhere should be permitted to be mined, subject to incorporating appropriate environmental safeguard measures in their mining plan.

Accordingly, Para 2(ix) of the Coastal Regulation Zone Notification **permits mining of rare minerals**, oil and gas in the Coastal Regulation Zone area since rare earth minerals are not found elsewhere.

The Expert Committee report further recommends that considering the need to respect the well recognized protection role of sand dunes against coastal and marine natural hazards, there is a need to integrate the same into the coastal management scheme. The report has suggested a scientific management approach to deal with dunes which include the following methods:

1. Conservation of fore dunes.
2. Preservation of rear dunes.
3. Restriction of Sand Mining. [NOT RARE EARTH MINERALS]
4. Develop artificial dunes and stimulate dune growth.

Interestingly, Prof M S Swaminathan report lists sand mining for minerals and construction as a threat, but does not include rare earth mining which it recommends for mining subject to adopting the above safeguards.

In view of the above, and also for obtaining EC for its expansion activities, TSPL has requested the ENVID Group of the Andhra University for Identification and Classification of Dunes within the TSPL mining lease (ML) area and to suggest a safe mining strategy to ensure conservation of the dunes.

STUDY AREA

The Mine Lease (ML) area of the TSPL, at Gara Mandal, Srikakulam District, Andhra Pradesh, is situated along the coastline 6 km (north) of Srikurmam village in the south, and extended up to Bandaruvanipeta village in the North. The ML area can be considered as a belt along the coastline, with a mean width up to 970 m from the High Tide Line (HTL), with an extent of 7.20 km², and 11.3 km of coastline.

The ML area existed in two Blocks (Southern Block and Northern Block) separated by a major drain that joins the sea. The Southern and Northern Blocks are named as **Vatsavalasa Block** and **Tonangi Block**, respectively. In the Vatsavalasa Block mining of heavy minerals was initiated in February 2009. Mining from the Tonangi Block is not started so far.

For the purpose of the dunal studies, the area was further divided in to *Five* Sub-blocks (Two in the Vatsavalasa Block and Three in the Tonangi Block (Fig 1). Each block was studied based on the direct observations validated by the contour maps prepared for the purpose. The physical features of these five sub-blocks are presented below:

No.	Block Name	Part Code	Mean Width (m)	Coast Length (km)
1	Vatsavalasa Block	V1	1032	2.6
2		V2	904	2.3
3	Tonangi Block	T1	794	2.1
4		T2	827	2.4
5		T3	519	1.9

The Vatsavalasa Block starts 6 km north from Srikurmam village and runs northeasterly for nearly 5 km, up to the southern margin of the mouth of a small creek. The V1 sub-block has a total ML area width varying from 986 m to 1082 m, with a mean width of 1032 m from the HTL. The ML area width of V2 sub-block is relatively narrow and its width ranges from 541 m to 1090 m, with a mean width of 904 m from the HTL.

The Tanangi Block starts from 200 m north of the creek mouth and runs northeasterly for 6.4 km. The block was divided into 3 sub-blocks [T1 (southern), T2 (Middle) and T3 (Northern)]. The sub-block T1 has a width varying from 726 m to 870 m, with a mean width of 794 m above the HTL; T2 block has a width ranging from 767 m to 880 m, with a mean width of 827 m above HTL; while the T3 block had a very wide range in the width of its beach front, ranging from a low of 395 m to a high of 625 m, and the mean width being 519 m above HTL.

STATUS OF THE SAND DUNES IN THE STUDY AREA

The beaches in the study area are generally reflexive beaches with a narrow beach front and prone for moderate sand deposition by the wave actions. Sand dunes in the area are sporadic in distribution, while the dunes are relatively smaller in size and height, compared to that of Tamil Nadu and Pondicherry coasts. A contour map of the study area was prepared (Annexure-I) to understand the beach profile and also identify the dunes. Based on this map and correlating with the direct observations, the dunes were identified in different blocks and marked in the Plan, based on the ecological criterion following the method prescribed by the Macaulay Institute, U.K.

Dunes from the HTL and their distribution in different sub-blocks of the study area is presented below:

Block Name	Sub-block	Distance of Dunes from HTL					
		Embryo Dunes (m from HTL)			Yellow Dunes (m from Emb. Dunes)		
		Min	Max	Mean	Min	Max	Mean
Vatsavalasa	V1	8	32	25	24	74	35
	V2	11	24	18	18	51	27
Tonangi	T1	8	26	23	19	39	31
	T2	9	26	20	22	40	28
	T3	6	24	20	16	32	26

Dunes generally, occurred within 25 m to 104 m from the HTL and very few were found in the area behind 104m. More precisely, of the total 325 dunes recorded in the TSPL area only 13 dunes, exist beyond 100m from the high tide.

The dunes are uninhabited barren land consisting of very scant natural vegetation and there were hardly any, endangered, or sensitive species. The species inhabited in the area have high resilience capacity and can reestablish themselves in a very short time.

Most Yellow dunes are covered by the runners, *Ipomoea pescaprae*, *Launaeasarmentosa*, and a grass species, *Spinifexsquarostus*, which are the general primary colonizers. In the latter stages, these were associated with weeds like *Portulaca quadrifida*, *Borreria hispida*, *Pedaliu murex*, *Solanum surretense*; and grasses like *Fimbristylisbis-umbellata*, *Dactylocteniuma egyptium* and *Perotis indica*.

Most of the Embryo and Yellow dunes have fallen below the 100 m HTL and thus, no mining was done so far and are left to the natural processes of their migration and succession. All the back dunes, **Grey Dunes**, existing in the MLA, above

the 100 m HTL were identified, and marked on the map (Annexure - I). Very few Grey Dunes are free from human activities, and all these were recorded from the Vatsavalasa block. But, all the Grey dunes in the Tonangi Block are under agriculture or plantation crops grown by the native communities. The details of the Grey Dunes identified and preserved are presented below:

Grey Dunes of Vatsavalasa Block:

Dunes which fall below 100 m of HTL, the zone for which currently TSPL has no EC for mining were not included.

Dune No	Co-ordinates	Area in Ha.	Distance from HTL	Height from GL
GD 1	X= 187843.0888, Y = 2022541.5690	0.18	435m	2.0m
GD 2	X= 188254.4343, Y = 2022509.9940	0.1839	230m	2.0m
GD 3	X= 188380.6453, Y = 2022792.5421	0.1518	426m	2.8m
GD 4	X= 188546.9741, Y = 2023171.0111	0.2147	698m	3.0m
GD 5	X= 188868.9447, Y = 2023701.1511	0.6676	1010m	2.28m
GD 6	X= 189547.6799, Y = 2023810.6987	0.1667	828m	2.8m
GD 7	X= 189813.0175, Y = 2023229.6340	0.3500	190m	2.7m
GD 8	X= 190214.1093, Y = 2023414.5481	0.2518	150m	3.0m
GD 9	X= 190166.6327, Y = 2023591.6984	0.2175	330m	2.3m
GD 10	X= 190174.1606, Y = 2023753.5110	0.1670	469m	2.89m
GD 11	X= 190303.5160, Y = 2023873.3063	0.3684	472m	2.5m
GD 12	X= 190540.2946, Y = 2024048.8858	0.0821	440m	2.6m
GD 13	X= 188852.4244, Y = 2022910.9209	0.5716	328m	3.3m

Of these 13 Grey Dunes, GD 4; GD 5 and GD 6 are well above the 500 m HTL. The total area under the Grey Dunes in this block is at 3.5731 ha and accounts for 1.06% of the 338 ha of MLA of the block.

Grey Dunes of Tonangi Block:

In Tonangi Block, the land slope and depth of the sand are relatively higher than in the Vatsavalasa block. However, there were no Grey Dunes which are allowed for natural succession. All the grey dunes were long back converted for agricultural or plantation crops. However, for the purposes of post-mining restoration of the beach and dunes' profile, the information on the **Dunes under Agriculture (AD)** is provided.

Dune No.	Coordinates		Area(m ²)	Max height	Survey No.
AD 1	2025600	192600	10426	10	148
AD 2	2025400	192800	12980	10	157
AD 3	2025800	193000	34580	10	144
AD 4	2025800	193200	400	10	160
AD 5	2025800	193400	1000	10	161
AD 6	2025800	193400	1000	10	162
AD 7	2025800	193400	2400	12	162
AD 8	2026000	193400	12000	14	162
AD 9	2026200	193400	2000	12	144
AD 10	2026200	193400	13300	10	144
AD 11	2026200	193600	800	10	162
AD 12	2026000	193800	1400	10	162
AD 13	2026200	193800	1500	10	164

AD 14	2026000	193800	1700	10	164
AD 15	2026000	194000	7220	10	171
AD 16	2026200	194000	9760	10	171
AD 17	2026000	194000	6340	12	164
AD 18	2026400	194000	11840	10	172
AD 19	2026200	194200	1880	10	173
AD 20	2026000	194200	20300	16	175
AD 21	2026200	194600	1240	10	179
AD 22	2026400	194600	3200	10	179
AD 23	2026400	194400	3700	14	178
AD 24	2026200	194200	1240	10	175
AD 25	2026400	194200	800	12	174
AD 26	2026600	194200	800	10	168
AD 27	2026600	194000	4800	10	168
AD 28	2026800	194600	3600	12	184
AD 29	2026800	194800	42400	10	187
AD 30	2027200	195200	15100	12	190
AD 31	2027000	195400	12000	10	190
AD 32	2027200	195400	3900	10	192
AD 33	2027200	195400	33800	12	192
AD 34	2027600	196200	9400	10	196
			288806		

Of these 34 Agriculture Dunes, XX are well above the 500 m HTL. The total area under the Grey Dunes in this block is at 28.8806 ha and accounts for 7.56% of the 382 ha of MLA of the block.

IMPACTS PLACER MINERALS MINING ON DUNES

Rare Earth minerals currently being mined in Orissa [IRE] and Andhra Pradesh [TSPL] are from inland placer deposits away from HTL. However, rare earth mining in Tamil Nadu and Kerala are mostly in the active beach areas between HTL and LTL where minerals get replenished by the wave action after mining and also in areas adjacent to the HTL. Thus there is no loss of minerals which gets accumulated seasonally and also occurs adjacent to HTL.

In the case of 720 ha of ML area of TSPL, the dunal areas identified accounts for nearly 100 ha (about 14% of total ML area), in which a reserve of nearly 1.2 Million tons of valuable placer minerals exists. Considering the present mining schedule, total area being mined every year may not exceed 30 ha (4% of total ML area). If dune mining is permitted, total dune area to be covered under mining will be about 4 ha per year only, which will be about 0.5% of the total ML area.

Prof M S Swaminathan Committee Report has stated that Placer mineral mining can be permitted within the coastal zone, with adequate safeguards as they are site specific, and the same is permitted under the recent CRZ Notification of 6th January, 2011.

As per the mining strategy, the mined out areas will be backfilled with the same sands after separating the placer minerals and the original profile of the land is restored. The time period between the mine opening and closure is expected to vary between 2 to 3 months, for larger blocks and the same can be shortened to less than 2 months for smaller areas like dunal areas. After the mine closure, vegetation cover

will be developed by plantation activity, using suitable native species of importance to the local communities.

Since, the natural profile of the dunes can be restored after mining, and the time period between the mine opening and mine closure is less, mining of dunes may not impact adversely on the environment or ecology. Also, the existing plant species are rapid colonizers, their recolonization can be ensured. On the other hand, the dunes can be planted with desired species as the soils are improving in organic content and can be made useful to the community needs. Thus, mining of placer minerals in the study area may not have any adverse impacts.

ANNEXURE

A Brief Review on Formation, types and habitats of Beach Sand Dunes

Sand dunes are mounds of windblown sand, which vary greatly in size, from less than one meter to tens of meters high. The size depends upon the supply of sand from the sea. There is even greater variation in the area covered by dunes.

Formation of Dunes:

Dunes form on coasts where the onshore winds encourage sand blown inland from off a beach while the backshore can support the accumulation of the sand. Any part of the upper beach, once dry, can lose sand to the wind, especially if the sand is fine, and dune formation proceeds in the direction towards which the wind direction is predominant.

The basic requirements that must be met for the formation of the sand dunes are: 1) a source of dry sand; 2) means to sort and transport the sand; and 3) a land area on which the sand can deposit and accumulate.

Characteristics of a Typical Dune Area:

Most beaches are not favourable for the formation of Dunal systems. In most areas, the dune formation ends up with the formation of dunes smaller in height, and not very far from the inter tidal zone. However, in some areas the dunes extend more than several hundreds of meters from the inter tidal zone, and a set of dunes of different

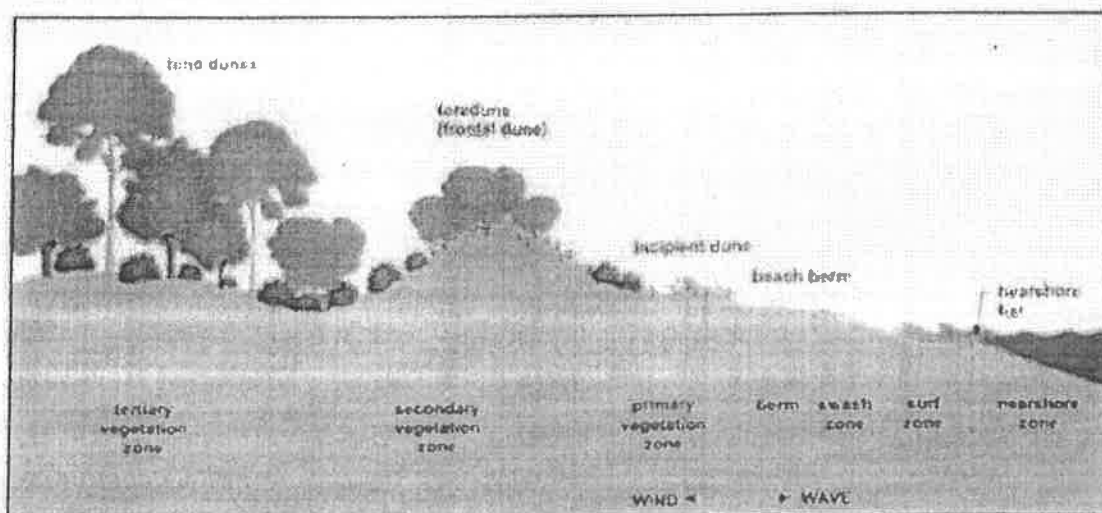
ages and successional stages are clearly seen running parallel to the coastline. Each of these set look like a crescent shaped, or horseshoe shaped, depending upon the wind pattern.

DUNE TYPES:

Spatial Types:

Initial deposits by the wave actions form small mounds along the high beaches which are subjected to harsh, conditions with salt spray from the sea, blowing strong winds, and poor availability of the nutrients. Such dunes are often well drained and dried.

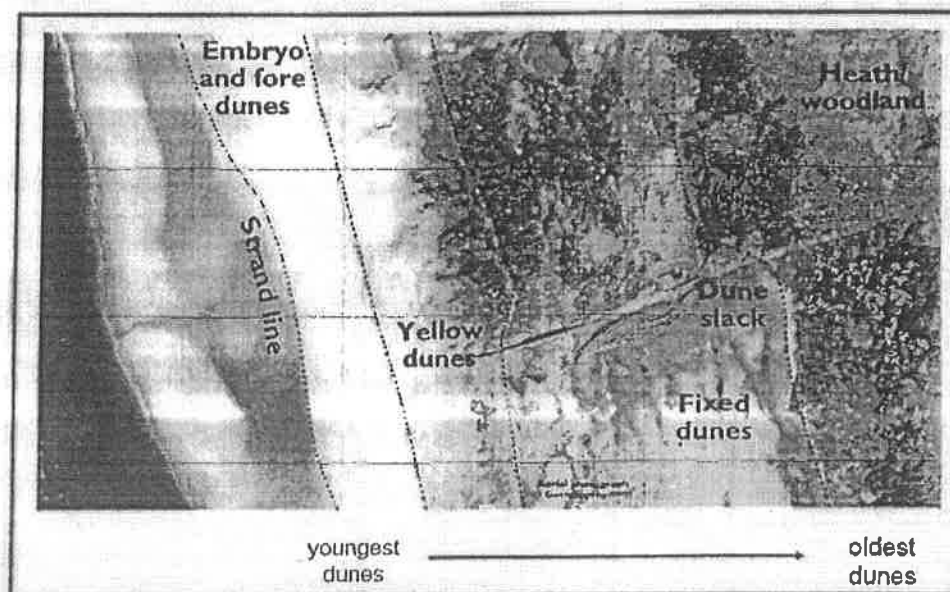
Several such dunes are further drifted backwards along the wind direction, and get deposited at the first interruption (a plant/rock/any object) to the path and gradually forms a bigger dune, larger in height and base. These dunes are relatively more stable. Where the winds are very strong, such type of dunes also get affected by wind erosion and helps formation of another set of dunes in the back.



Habitat Types:

As a dune forms, plant succession occurs. Rotting sea weed brought in by storm waves add enough nutrients to allow pioneer species to colonize the dune. These plants are well adapted to the harsh conditions and develop more favourable conditions to other species, and gradually higher species may establish.

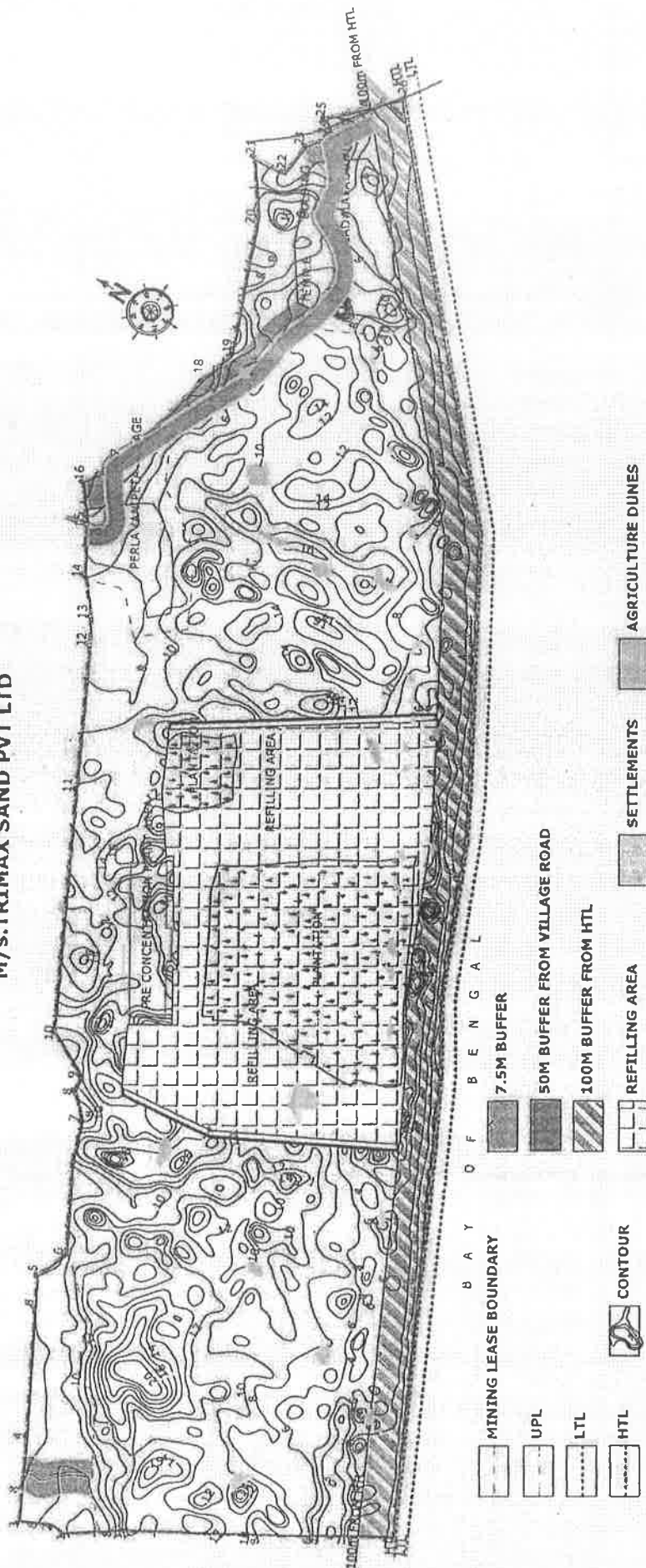
Dunes may be highly unstable and vulnerable to tidal action and wind actions or may be relatively more stable but prone for migration of sand to form the back dunes which over time have developing vegetation (herbaceous and shrub species). Dunes with high humus content are favourable for growth of trees and other higher species. Such dunes, over time attain nearby local soil conditions, as the ecological turnover enhances and nutrient cycling is established, thus a stage is reached during ecological succession when they are no longer sand dunes. This is known as ecological succession of dunes.



Beaches and dunes are part of natural coastal defenses; reduce erosion risk from storm bite and sand movement. Generally, dunes abutting the sea and within 50-100 m from the High Tide line act as sand reserve for coastal protection and stability and protect the coast from tidal surges, large waves, such as the tsunami waves.

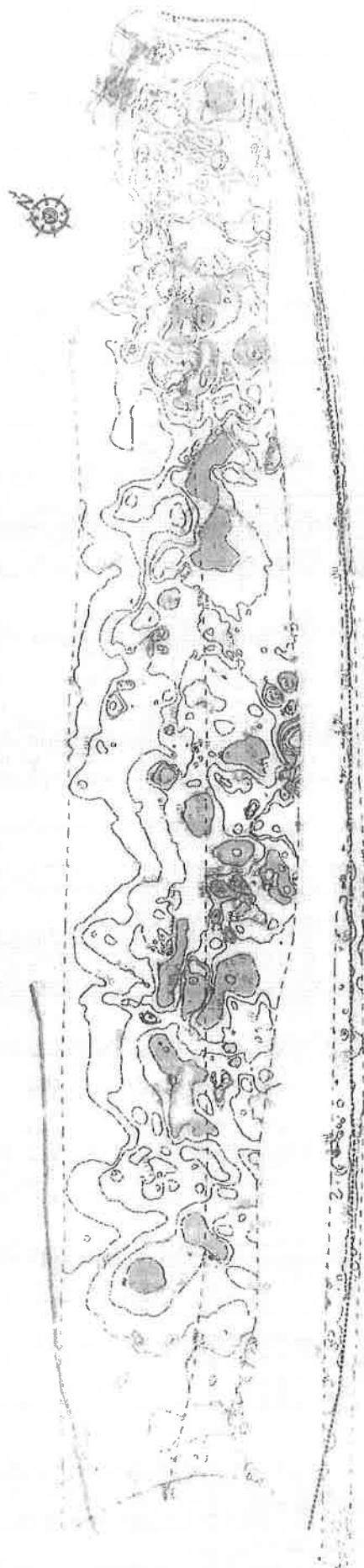


VATSAVALASA MINING LEASE BLOCK
 AGRICULTURE DUNES
 M/s. TRIMAX SAND PVT LTD



A-305 (a)

TONANGI MINING LEASE BLOCK
 AGRICULTURE DUNES
 M/s. TRIMAX SAND PVT LTD



A - 305(b)

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Form-No. TCLL/GF/RF-138

3370

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ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization

Laboratory Recognised by Ministry Environment, Forests and Climate Change, Govt, New Delhi

TEST REPORT

Test Report No. TLC/V/Env/TSPL/8/0917

dt05.10.2017

Description of Test:

Phisico-chemical Analysis of Water

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

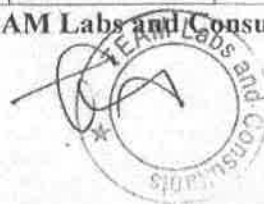
Water samples as per Details given

Date of Sample Collected :

21.09.2017

No	Parameter	Mogadalapadu Open Well water	Parlavanipeta Open Well water	Pedda vatsavalasa Open Well water	Yerraguddi Open Well water	Pedda Tonangi Open Well water
1	pH	7.50	8.20	7.6	8.15	7.50
2	Colour Hazen units	5	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	810mgpl	1110 mgpl	1370mgpl	490mgpl	490 mgpl
5	Total Suspended Solids	10mgpl	6mgpl	8mgpl	6mgpl	8mgpl
6	Turbidity	6.9NTU	5.0 NTU	6.5NTU	3.4NTU	6.6 NTU
7	Total Hardness as CaCo3	440mgpl	170mgpl	600mgpl	120mgpl	150mgpl
8	Calcium as CaCo3	320mgpl	105mgpl	410mgpl	80mgpl	100mgpl
9	Magnesium as CaCo3	120mgpl	65mgpl	190 mgpl	40mgpl	50 mgpl
10	Chlorides Cl-	185mgpl	280mgpl	475mgpl	95mgpl	170mgpl
11	Flouride	0.6mgpl	0.5mgpl	0.5mgpl	0.4mgpl	0.5mgpl
12	Sulphates	115mgpl	160mgpl	190mgpl	105mgpl	90mgpl
13	Nitrates	75.5 mgpl	52.0 mgpl	29.0 mgpl	5.5 mgpl	12.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL	BDL
15	Iron	0.06mgpl	0.07mgpl	0.06mgpl	0.04mgpl	0.04mgpl
16	Lead	BDL	BDL	BDL	BDL	BDL
	Water table from ground level in mtrs	3.34	2.6	2.2	4.63	2.5

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TEST REPORT

Test Report No. TLC/V/Env/TSPL/9/0917

dt05.10.2017

Description of Test:

Phisico-chemical Analysis of Water

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

Water samples as per Details given

Date of Sample Collected :

21.09.2017

No	parameter	PCP open well	Tails water	Pond at Vatchavalasa	MSP Open well
1	pH	7.5	7.8	8.15	7.80
2	Colour Hazen units	5	5	5	5
3	Odour	un objectionable	un objection able	un objectionable	un objectionable
4	Total Dissolved solids	290 mgpl	240mgpl	390 mgpl	410mgpl
5	Total Suspended Solids	5	18mgpl	5	5mgpl
6	Turbidity	1.8NTU	95NTU	2.8NTU	2.5 NTU
7	Total Hardness as CaCo3	120mgpl	60mgpl	110mgpl	240mgpl
8	Calcium as CaCo3	80mgpl	40mgpl	70mgpl	150mgpl
9	Magnesium as CaCo3	40mgpl	20mgpl	40mgpl	90mgpl
10	Chlorides Cl-	65mgpl	70mgpl	140mgpl	80mgpl
11	Flouride	0.5 mgpl	0.5mgpl	0.5 mgpl	0.4mgpl
12	Sulphates	25mgpl	45mgpl	37mgpl	55mgpl
13	Nitrates	0.5mgpl	0.5mgpl	1.5mgpl	0.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL
15	Iron	0.04mgpl	0.06mgpl	0.03mgpl	0.03mgpl
16	Lead	BDL	BDL	BDL	BDL
	Water table from groundlevel inmtrs	1.04	-	-	1.75

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TEST REPORT

Test Report No. TLC/V/Env/TSPL/10/0917

dt05.10.2017

Description of Test:

Phisico-chemical Analysis of Water

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

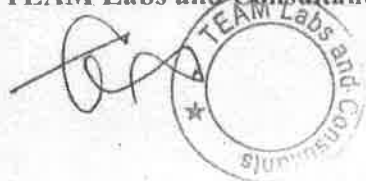
Water samples as per Details given

Date of Sample Collected :

21.09.2017

No	Parameter	Komara vanipeta O. W. water	Bandaruvani peta O. W. water	Chinatonangi open well water	Batchuvanipeta open well water
1	pH	8.10	7.50	7.30	7.25
2	Colour Hazen units	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	880mgpl	1120mgpl	460mgpl	2980mgpl
5	Total Suspended Solids	5mgpl	5mgpl	5mgpl	5mgpl
6	Turbidity	4.5 NTU	5.0NTU	4.0NTU	9.2 NTU
7	Total Hardness as CaCo ₃	420mgpl	390mgpl	150mgpl	690mgpl
8	Calcium as CaCo ₃	290mgpl	270mgpl	100mgpl	410mgpl
9	Magnesium as CaCo ₃	130mgpl	120 mgpl	50mgpl	280mgpl
10	Chlorides Cl-	220mgpl	340mgpl	120mgpl	890mgpl
11	Flouride	0.5mgpl	0.5mgpl	0.4mgpl	0.6mgpl
12	Sulphates	170mgpl	375mgpl	70mgpl	290mgpl
13	Nitrates	18.0 mgpl	15.0 mgpl	17.0 mgpl	11.0 mgpl
14	Phosphates	BDL	BDL	BDL	BDL
15	Iron	0.05mgpl	0.04gpl	0.05mgpl	0.07mgpl
16	Lead	BDL	BDL	BDL	BDL
	Water table from ground level in mtrs	2.70	2.10	1.48	1.68

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Laboratory Recognised by Ministry Environment, Forests and Climate Change, Govt, New Delhi**TEST REPORT**

Test Report No. TLC/V/Env/TSPL/8/0817

dt06.09.2017

Description of Test: Phisico-chemical Analysis of Water

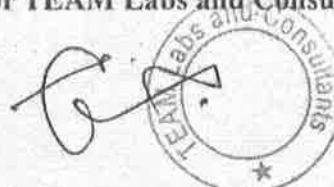
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 18.17.08.2017

No	Parameter	Mogadalapadu Open Well water	Parlavanipeta Open Well water	Pedda vatsavalasa Open Well water	Yerraguddi Open Well water	Pedda Tonangi Open Well water
1	pH	7.55	7.7	7.5	7.9	8.05
2	Colour Hazen units	5	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	1040mgpl	1230mgpl	1450mgpl	440mgpl	950mgpl
5	Total Suspended Solids	8mgpl	7mgpl	10mgpl	6mgpl	8mgpl
6	Turbidity	6.2NTU	5.8 NTU	8.5NTU	2.9NTU	6.2 NTU
7	Total Hardness as CaCo3	505 mgpl	195mgpl	590mgpl	110mgpl	410mgpl
8	Calcium as CaCo3	365mgpl	110mgpl	410mgpl	70mgpl	240mgpl
9	Magnesium as CaCo3	140mgpl	85mgpl	180 mgpl	40mgpl	170 mgpl
10	Chlorides Cl-	210mgpl	220mgpl	440mgpl	170mgpl	520mgpl
11	Flouride	0.6mgpl	0.5mgpl	0.5mgpl	0.4mgpl	0.5mgpl
12	Sulphates	120mgpl	180mgpl	205mgpl	115mgpl	220mgpl
13	Nitrates	85.5 mgpl	58.0 mgpl	35.0 mgpl	0.5 mgpl	18.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL	BDL
15	Iron	0.06mgpl	0.07mgpl	0.06mgpl	0.04mgpl	0.04mgpl
16	Lead	BDL	BDL	BDL	BDL	BDL
	Water table from ground level in mtrs	3..0	2.4	1.7	4.0	2.5

For TEAM Labs and Consultants



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TEST REPORT

Test Report No. TLC/V/Env/TSPL/9/0817

dt06.09.2017

Description of Test: Phisico-chemical Analysis of Water

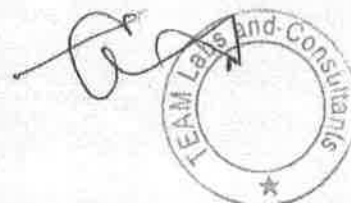
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 18.17.08.2017

No	parameter	PCP open well	Tails water	Pond at Vatchavalasa	MSP Open.well
1	pH	7.5	7.5	7.5	7.75
2	Colour Hazen units	5	5	5	5
3	Odour	un objectionable	un objection able	un objectionable	un objectionable
4	Total Dissolved solids	260	260mgpl	250	480mgpl
5	Total Suspended Solids	5	18mgpl	5	5mgpl
6	Turbidity	1.9 NTU	9.8NTU	1.9NTU	2.9 NTU
7	Total Hardness as CaCo3	130mgpl	90mgpl	80mgpl	230mgpl
8	Calcium as CaCo3	80mgpl	60mgpl	60mgpl	140mgpl
9	Magnesium as CaCo3	50mgpl	30mgpl	20mgpl	90mgpl
10	Chlorides Cl-	55mgpl	80mgpl	155mgpl	120mgpl
11	Flouride	0.5 mgpl	0.5mgpl	0.5 mgpl	0.4mgpl
12	Sulphates	22mgpl	60mgpl	35mgpl	90mgpl
13	Nitrates	0.5mgpl	0.5mgpl	1.0mgpl	0.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL
15	Iron	0.04mgpl	0.06mgpl	0.03mgpl	0.03mgpl
16	Lead	BDL	BDL	BDL	BDL
	Water table from groundlevel inmtrs	0.9	-	-	1.5

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ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
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Test Report No. TLC/V/Env/TSPL/10/0817

dt 06.09.2017

Description of Test: Phisico-chemical Analysis of Water

Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 18.08.2017

No	Parameter	Komara vanipeta O. W. water	Bandaruvani peta O. W. water	Chinatonangi open well water	Batchuvanipeta open well water
1	pH	7.40	7.50	7.30	7.40
2	Colour Hazen units	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	1010mgpl	1270mgpl	520mgpl	2530mgpl
5	Total Suspended Solids	5mgpl	5mgpl	5mgpl	5mgpl
6	Turbidity	4.9 NTU	6.0NTU	6.0NTU	8.5 NTU
7	Total Hardness as CaCo3	430mgpl	610mgpl	210mgpl	530mgpl
8	Calcium as CaCo3	290mgpl	370mgpl	130mgpl	370mgpl
9	Magnesium as CaCo3	140mgpl	240 mgpl	80mgpl	160mgpl
10	Chlorides Cl-	540mgpl	370mgpl	150mgpl	310mgpl
11	Flouride	0.5mgpl	0.5mgpl	0.4mgpl	0.6mgpl
12	Sulphates	140mgpl	395mgpl	80mgpl	325mgpl
13	Nitrates	15.0 mgpl	10.0 mgpl	15.0 mgpl	9.0 mgpl
14	Phosphates	BDL	BDL	BDL	BDL
15	Iron	0.05mgpl	0.04gpl	0.05mgpl	0.07mgpl
16	Lead	BDL	BDL	BDL	BDL
	Water table from ground level in mtrs	2.45	1.84	1.20	1.80

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TEST REPORT

Test Report No.TLC/V/Env/TSPL/8/0717

dt05.08.2017

Description of Test: Phisico-chemical Analysis of Water

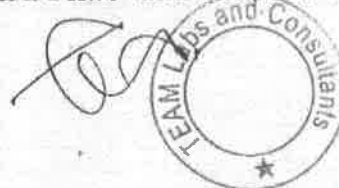
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 18.07.2017

No	Parameter	Mogadalapadu Open Well water	Parlavanipeta Open Well water	Pedda vatsavalasa Open Well water	Yerraguddi Open Well water	Pedda Tonangi Open Well water
1	pH	7.55	7.85	7.85	7.7	8.05
2	Colour Hazen units	5	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	1430mgpl	1470mgpl	1860mgpl	380mgpl	950mgpl
5	Total Suspended Solids	8mgpl	7mgpl	12mgpl	6mgpl	8mgpl
6	Turbidity	5.6NTU	3.8 NTU	7.5NTU	2.5NTU	5.2 NTU
7	Total Hardness as CaCo3	470 mgpl	190mgpl	590mgpl	105mgpl	490mgpl
8	Calcium as CaCo3	350mgpl	110mgpl	430mgpl	70mgpl	310mgpl
9	Magnesium as CaCo3	120mgpl	80mgpl	160 mgpl	35mgpl	180 mgpl
10	Chlorides Cl-	270mgpl	230mgpl	465mgpl	140mgpl	530mgpl
11	Flouride	0.6mgpl	0.5mgpl	0.5mgpl	0.4mgpl	0.5mgpl
12	Sulphates	120mgpl	178mgpl	210mgpl	85mgpl	260mgpl
13	Nitrates	95.5 mgpl	55.5 mgpl	39.0 mgpl	10.5 mgpl	18.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL	BDL
15	Iron	0.06mgpl	0.07mgpl	0.06mgpl	0.04mgpl	0.04mgpl
16	Lead	BDL	BDL	BDL	BDL	BDL
	Water table from ground level in mtrs	3.26	2.75	2.44	6.57	3.09

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TEST REPORT

Test Report No.TLC/V/Env/TSPL/8/0617

dt05.07.2017

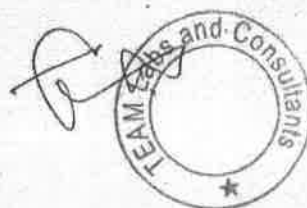
Description of Test: Phisico-chemical Analysis of Water

Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 29.06.2017

	Parameter	Mogadalapadu Open Well water	Parlavanipeta Open Well water	Pedda vatsavalasa Open Well water	Yerraguddi Open Well water	Pedda Tonangi Open Well water
1	pH	7.55	7.85	7.85	7.9	8.05
2	Colour Hazen units	5	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	1080mgpl	1240mgpl	1480mgpl	615mgpl	1250mgpl
5	Total Suspended Solids	8mgpl	7mgpl	12mgpl	6mgpl	8mgpl
6	Turbidity	5.6NTU	3.8 NTU	7.5NTU	2.5NTU	5.2 NTU
7	Total Hardness as CaCo ₃	510 mgpl	180mgpl	570mgpl	110mgpl	470mgpl
8	Calcium as CaCo ₃	360mgpl	110mgpl	410mgpl	70mgpl	290mgpl
9	Magnesium as CaCo ₃	150mgpl	70mgpl	160 mgpl	40mgpl	180 mgpl
10	Chlorides Cl ⁻	220mgpl	250mgpl	425mgpl	155mgpl	510mgpl
11	Flouride	0.6mgpl	0.5mgpl	0.5mgpl	0.4mgpl	0.5mgpl
12	Sulphates	130mgpl	175mgpl	220mgpl	105mgpl	280mgpl
13	Nitrates	115.5 mgpl	62.9 mgpl	32.0 mgpl	0.5 mgpl	15.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL	BDL
15	Iron	0.06mgpl	0.07mgpl	0.06mgpl	0.04mgpl	0.04mgpl
16	Lead	BDL	BDL	BDL	BDL	BDL
	Water table from ground level in mtrs	3.8	3.15	4.25	8.25	4.22

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TEST REPORT

Test Report No.TLC/V/Env/TSPL/9/0617

dt05.07.2017

Description of Test:

Phisico-chemical Analysis of Water

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

Water samples as per Details given

Date of Sample Collected :

29.06.2017

No	parameter	PCP open well	Tails water	Pond at Vatchavalasa	MSP Open well
1	pH	7.5	7.95	7.85	7.90
2	Colour Hazen units	5	5	5	5
3	Odour	un objectionable	un objection able	un objectionable	un objectionable
4	Total Dissolved solids	360	360mgpl	250	580mgpl
5	Total Suspended Solids	5	18mgpl	5	5mgpl
6	Turbidity	1.5 NTU	9.2NTU	1.4NTU	2.5 NTU
7	Total Hardness as CaCo3	150mgpl	105mgpl	90mgpl	225mgpl
8	Calcium as CaCo3	105mgpl	60mgpl	60mgpl	130mgpl
9	Magnesium as CaCo3	45mgpl	45mgpl	30mgpl	95mgpl
10	Chlorides Cl-	50mgpl	70mgpl	195mgpl	105mgpl
11	Flouride	0.5 mgpl	0.4mgpl	0.5 mgpl	0.4mgpl
12	Sulphates	20mgpl	59mgpl	30mgpl	70mgpl
13	Nitrates	0.5mgpl	0.5mgpl	1.0mgpl	0.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL
15	Iron	0.04mgpl	0.06mgpl	0.03mgpl	0.03mgpl
16	Lead	BDL	BDL	BDL	BDL
	Water table from groundlevel inmtrs	2.3	-	-	2.47

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TEST REPORT

Test Report No. TLC/V/Env/TSPL/10/0617

dt05.07.2017

Description of Test: Phisico-chemical Analysis of Water

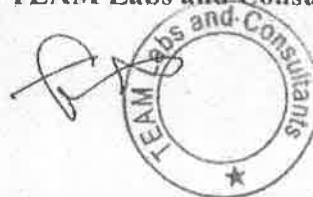
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 29.06.2017

No	Parameter	Komara vanipeta O. W. water	Bandaruvani peta O. W. water	Chinatonangi open well water	Batchuvanipeta open well water
1	pH	7.50	7.25	7.25	7.25
2	Colour Hazen units	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	1050mgpl	1190mgpl	780mgpl	2290mgpl
5	Total Suspended Solids	5mgpl	5mgpl	5mgpl	5mgpl
6	Turbidity	4.0 NTU	3.0NTU	4.2NTU	5.5 NTU
7	Total Hardness as CaCo3	410mgpl	550mgpl	200mgpl	550mgpl
8	Calcium as CaCo3	290mgpl	350mgpl	130mgpl	370mgpl
9	Magnesium as CaCo3	120mgpl	200 mgpl	70mgpl	180mgpl
10	Chlorides Cl-	560mgpl	325mgpl	190mgpl	330mgpl
11	Flouride	0.5mgpl	0.5mgpl	0.4mgpl	0.6mgpl
12	Sulphates	132mgpl	390mgpl	85mgpl	365mgpl
13	Nitrates	50.0 mgpl	4.0 mgpl	12.0 mgpl	4.0 mgpl
14	Phosphates	BDL	BDL	BDL	BDL
15	Iron	0.05mgpl	0.04gpl	0.05mgpl	0.07mgpl
16	Lead	BDL	BDL	BDL	BDL
	Water table from ground level in mtrs	4.60	3.1	1.8	4.35

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TEST REPORT

Test-Report No.TLC/V/Env/TSPL/8/0517

dt05.06.2017

Description of Test:

Phisico-chemical Analysis of Water

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

Water samples as per Details given

Date of Sample Collected :

16.05.2017

	Parameter	Mogadalapadu Open Well water	Parlavanipeta Open Well water	Pedda vatsavalasa Open Well water	Yerraguddi Open Well water	Pedda Tonangi Open Well water
1	pH	8.15	7.95	7.95	8.1	8.05
2	Colour Hazen units	5	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	1250mgpl	1620mgpl	1890mgpl	770mgpl	2250mgpl
5	Total Suspended Solids	5mgpl	5mgpl	8mgpl	5mgpl	7mgpl
6	Turbidity	5.2 NTU	4.6 NTU	7.5NTU	2.2NTU	7.8 NTU
7	Total Hardness as CaCo3	420 mgpl	230mgpl	470mgpl	130mgpl	460mgpl
8	Calcium as CaCo3	270mgpl	150mgpl	310mgpl	90mgpl	290mgpl
9	Magnesium as CaCo3	150mgpl	80mgpl	160 mgpl	40mgpl	170 mgpl
10	Chlorides Cl-	190mgpl	260mgpl	410mgpl	80mgpl	505mgpl
11	Flouride	0.6mgpl	0.5mgpl	0.5mgpl	0.4mgpl	0.5mgpl
12	Sulphates	80mgpl	180mgpl	235mgpl	80mgpl	275mgpl
13	Nitrates	62.0 mgpl	22.5 mgpl	32.5 mgpl	5.0 mgpl	9.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL	BDL
15	Iron	0.06mgpl	0.06mgpl	0.06mgpl	0.05mgpl	0.04mgpl
16	Lead	BDL	BDL	BDL	BDL	BDL
	Water table from ground level in mtrs	4.3	3.5	4.7	8.35	4.17

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TEST REPORT

Test Report No. TLC/V/Env/TSPL/9/0517

dt 05.06.2017

Description of Test: Phisico-chemical Analysis of Water

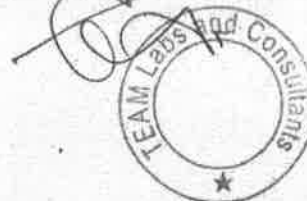
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 16.05.2017

No	parameter	PCP open well	Tails water	Pond at Vatchavalasa	MSP Open well
1	pH	7.6	7.8	8.15	7.95
2	Colour Hazen units	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	720	560mgpl	820	680mgpl
5	Total Suspended Solids	5	15mgpl	5	5mgpl
6	Turbidity	2.0 NTU	8.9NTU	1.8NTU	2.8 NTU
7	Total Hardness as CaCo3	105mgpl	90mgpl	150mgpl	220mgpl
8	Calcium as CaCo3	70mgpl	60mgpl	90mgpl	130mgpl
9	Magnesium as CaCo3	35mgpl	30mgpl	60mgpl	90mgpl
10	Chlorides Cl-	90mgpl	75mgpl	195mgpl	80mgpl
11	Flouride	0.5 mgpl	0.4mgpl	0.5 mgpl	0.4mgpl
12	Sulphates	65mgpl	55mgpl	30mgpl	50mgpl
13	Nitrates	0.5mgpl	0.5mgpl	1.0mgpl	0.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL
15	Iron	0.05mgpl	0.06mgpl	0.03mgpl	0.03mgpl
16	Lead	BDL	BDL	BDL	BDL
	Water table from groundlevel inmtrs	2.2	-	-	2.7

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Test Report No.TLC/V/Env/TSPL/10/0517

dt05.06.2017

Description of Test: Phisico-chemical Analysis of Water

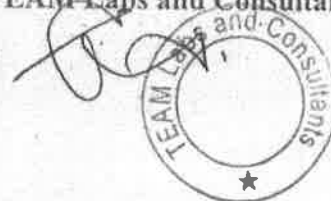
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 16.05.2017

No	Parameter	Komara vanipeta O. W.water	Bandaruvani peta O. W.water	Chinatonangi open well water	Batchuvanipeta open well water
1	pH	8.0	7.2	8.05	7.5
2	Colour Hazen units	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	1550mgpl	1310mgpl	690mgpl	1990mgpl
5	Total Suspended Solids	5mgpl	5mgpl	5mgpl	5mgpl
6	Turbidity	5.0 NTU	5.0NTU	3.2NTU	8.8 NTU
7	Total Hardness as CaCo3	470mgpl	580mgpl	210mgpl	580mgpl
8	Calcium as CaCo3	340mgpl	360mgpl	140mgpl	390mgpl
9	Magnesium as CaCo3	130mgpl	220 mgpl	70mgpl	190mgpl
10	Chlorides Cl-	285mgpl	360mgpl	140mgpl	480mgpl
11	Flouride	0.5mgpl	0.5mgpl	0.4mgpl	0.6mgpl
12	Sulphates	120mgpl	380mgpl	36mgpl	270mgpl
13	Nitrates	55.0 mgpl	10.0 mgpl	15.0 mgpl	9.0 mgpl
14	Phosphates	BDL	BDL	BDL	BDL
15	Iron	0.05mgpl	0.04gpl	0.07mgpl	0.06mgpl
16	Lead	BDL	BDL	BDL	BDL
	Water table from ground level in mtrs	4.45	3.5	2.3	4.19

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TEST REPORT

Test Report No.TLC/V/Env/TSPL/8/0417

dt06.05.2017

Description of Test: Phisico-chemical Analysis of Water

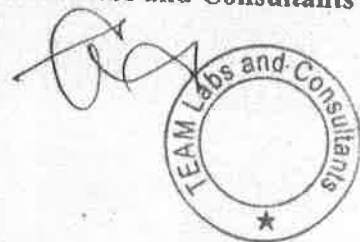
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 12.04.2017

No	Parameter	Mogadalapadu Open Well water	Parlavanipeta Open Well water	Pedda vatsavalasa Open Well water	Yerraguddi Open Well water	Pedda Tonangi Open Well water
1	pH	8.05	8.05	7.90	8.2	8.05
2	Colour Hazen units	5	5	5	5	5
3	Odour	un objectionable	un objectionable	un objectionable	un objectionable	un objectionable
4	Total Dissolved solids	1050mgpl	1350mgpl	2050mgpl	690mgpl	2250mgpl
5	Total Suspended Solids	5mgpl	5mgpl	8mgpl	5mgpl	7mgpl
6	Turbidity	4.9 NTU	5.6 NTU	9.5NTU	2.5NTU	9.8 NTU
7	Total Hardness as CaCo3	410 mgpl	210mgpl	480mgpl	120mgpl	480mgpl
8	Calcium as CaCo3	260mgpl	150mgpl	310mgpl	80mgpl	310mgpl
9	Magnesium as CaCo3	150mgpl	60mgpl	170 mgpl	40mgpl	170 mgpl
10	Chlorides Cl-	180mgpl	240mgpl	430mgpl	70mgpl	510mgpl
11	Flouride	0.6mgpl	0.5mgpl	0.5mgpl	0.4mgpl	0.5mgpl
12	Sulphates	85mgpl	190mgpl	225mgpl	70mgpl	265mgpl
13	Nitrates	69.0 mgpl	27.5 mgpl	38.5 mgpl	5.0 mgpl	11.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL	BDL
15	Iron	0.06mgpl	0.06mgpl	0.06mgpl	0.05mgpl	0.04mgpl
16	Lead	BDL	BDL	BDL	BDL	BDL
	Water table from ground level in mtrs	4.2	3.35	4.57	8.2	4.17

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Test Report No.TLC/V/Env/TSPL/9/0417

dt06.05.2017

Description of Test:

Phisico-chemical Analysis of Water

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

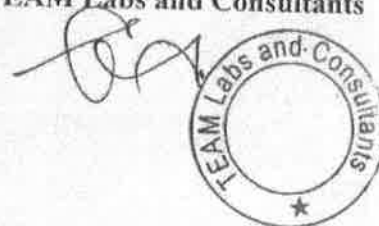
Water samples as per Details given

Date of Sample Collected :

12.04.2017

No	parameter	PCP open well	Tails water	Pond at Vatchavalasa	MSP Open well
1	pH	7.7	7.9	8.05	7.9
2	Colour Hazen units	5	5	5	5
3	Odour	un objectionable	un objection able	un objectionable	un objectionable
4	Total Dissolved solids	420	360mgpl	740	450mgpl
5	Total Suspended Solids	5	12mgpl	5	5mgpl
6	Turbidity	1.7NTU	5.9NTU	1.5NTU	3.8 NTU
7	Total Hardness as CaCo3	90mgpl	95mgpl	150mgpl	210mgpl
8	Calcium as CaCo3	60mgpl	60mgpl	90mgpl	120mgpl
9	Magnesium as CaCo3	30mgpl	35mgpl	60mgpl	90mgpl
10	Chlorides Cl-	95mgpl	65mgpl	205mgpl	85mgpl
11	Flouride	0.5 mgpl	0.4mgpl	0.5 mgpl	0.4mgpl
12	Sulphates	50mgpl	50mgpl	35mgpl	45mgpl
13	Nitrates	0.5mgpl	0.5mgpl	1.0mgpl	0.5 mgpl
14	Phosphates	BDL	BDL	BDL	BDL
15	Iron	0.05mgpl	0.06mgpl	0.03mgpl	0.03mgpl
16	Lead	BDL	BDL	BDL	BDL
	Water table from groundlevel inmtrs	2.0	-	-	2.65

For TEAM Labs and Consultants



Piezometer Monitoring for the month of July-2017

Location	Date	Time	Temp (C)	pH	EC (uS/cm @25C)	TDS (mg/L)	SAL (PSU)	Water Table +MSL
PM-1	31-Jul-17	12:50:00	30.1	7.76	585	380	0.25	0.578
PM-2	30-Jul-17	12:28:00	32.8	6.97	545	354	0.23	6.894
PM-3	31-Jul-17	12:13:00	30.9	6.95	348	226	0.11	3.216
PM-4	31-Jul-17	10:07:00	30.3	7.36	338	219	0.11	3.640
PM-5	30-Jul-17	11:26:00	30.5	7.12	299	194	0.09	4.427
PM-6	30-Jul-17	11:03:00	30.3	7.55	289	187	0.09	1.030
PM-7	30-Jul-17	11:43:00	29.6	6.99	161	104	0.05	0.930

Piezometer Monitoring for the month of August-2017

Location	Date	Time	Temp (C)	pH	EC (uS/cm @25C)	TDS (mg/L)	SAL (PSU)	Water Table +MSL
PM-1	31-Aug-17	12:47:31	30.1	7.65	367	238	0.12	0.978
PM-2	31-Aug-17	12:25:46	32.3	7.57	465	302	0.15	7.094
PM-3	31-Aug-17	12:15:30	31.3	7.05	312	202	0.1	3.866
PM-4	31-Aug-17	11:09:20	30.5	7.49	361	234	0.11	3.670
PM-5	31-Aug-17	11:36:38	30.7	7.63	278	180	0.09	4.597
PM-6	31-Aug-17	11:22:54	31.1	7.79	259	168	0.08	1.090
PM-7	31-Aug-17	11:49:24	30.1	7.47	161	104	0.05	1.430

Piezometer Monitoring for the month of September-2017

Location	Date	Time	Temp (C)	pH	EC (uS/cm @25C)	TDS (mg/L)	SAL (PSU)	Water Table +MSL
PM-1	29-Sep-17	14:42:05	29.9	7.82	470	305	0.15	0.928
PM-2	29-Sep-17	11:49:23	32.3	7.45	443	287	0.14	6.894
PM-3	29-Sep-17	11:39:40	30.9	7.03	306	198	0.1	3.216
PM-4	29-Sep-17	10:58:07	31.2	7.28	320	208	0.10	3.610
PM-5	29-Sep-17	11:05:54	31.5	7.67	278	180	0.09	4.477
PM-6	29-Sep-17	10:42:11	31.1	8.31	259	168	0.08	0.800
PM-7	29-Sep-17	11:19:24	30.2	7.54	130	84	0.04	1.900

Piezometer Monitoring for the month of April-2017

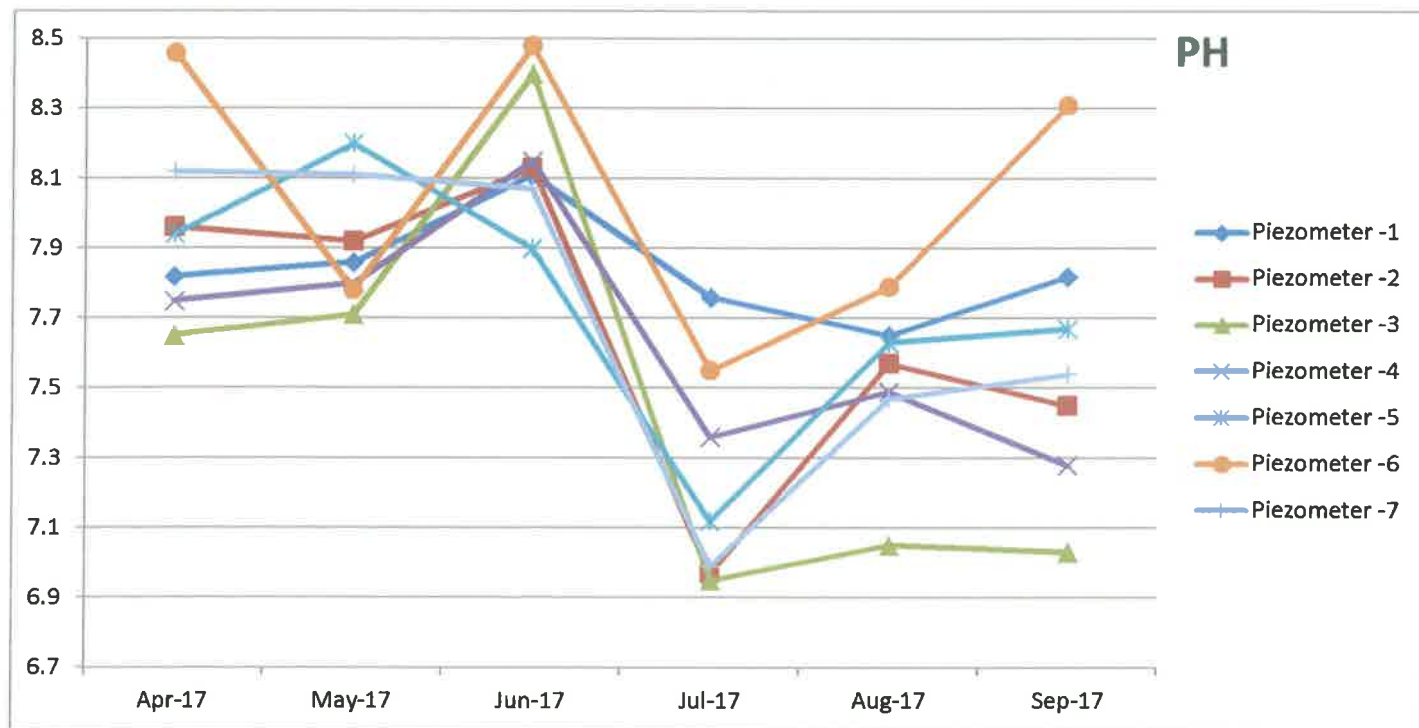
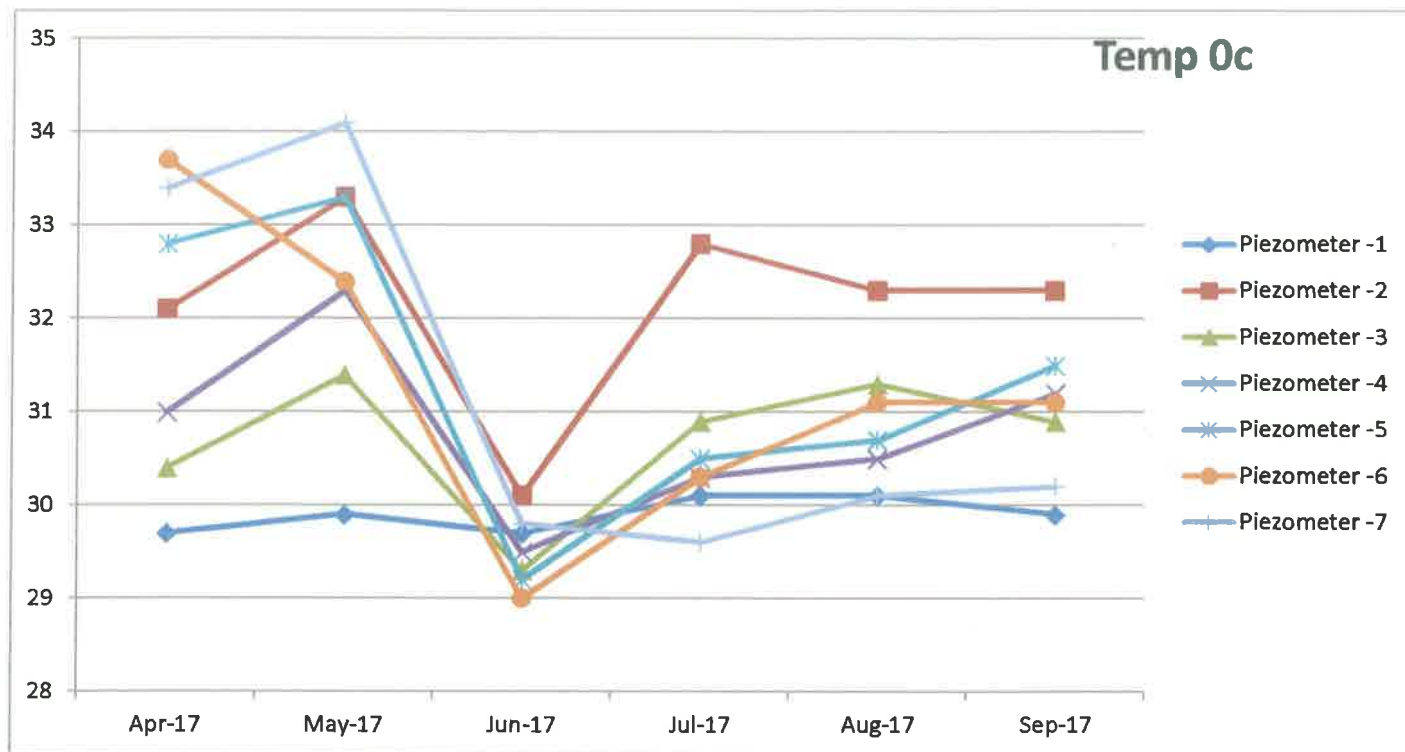
Location	Date	Time	Temp (C)	pH	EC (uS/cm @25C)	TDS (mg/L)	SAL (PSU)	Water Table +MSL
PM-1	30-Apr-17	8:41:21	29.7	7.82	582	378	0.24	0.428
PM-2	30-Apr-17	9:24:37	32.1	7.96	413	268	0.13	7.594
PM-3	30-Apr-17	9:13:41	30.4	7.65	235	152	0.07	2.866
PM-4	30-Apr-17	8:57:22	31	7.75	381	247	0.12	2.890
PM-5	30-Apr-17	10:13:25	32.8	7.94	309	200	0.1	4.047
PM-6	30-Apr-17	10:03:45	33.7	8.46	160	104	0.05	0.820
PM-7	30-Apr-17	9:49:25	33.4	8.12	330	210	0.1	0.840

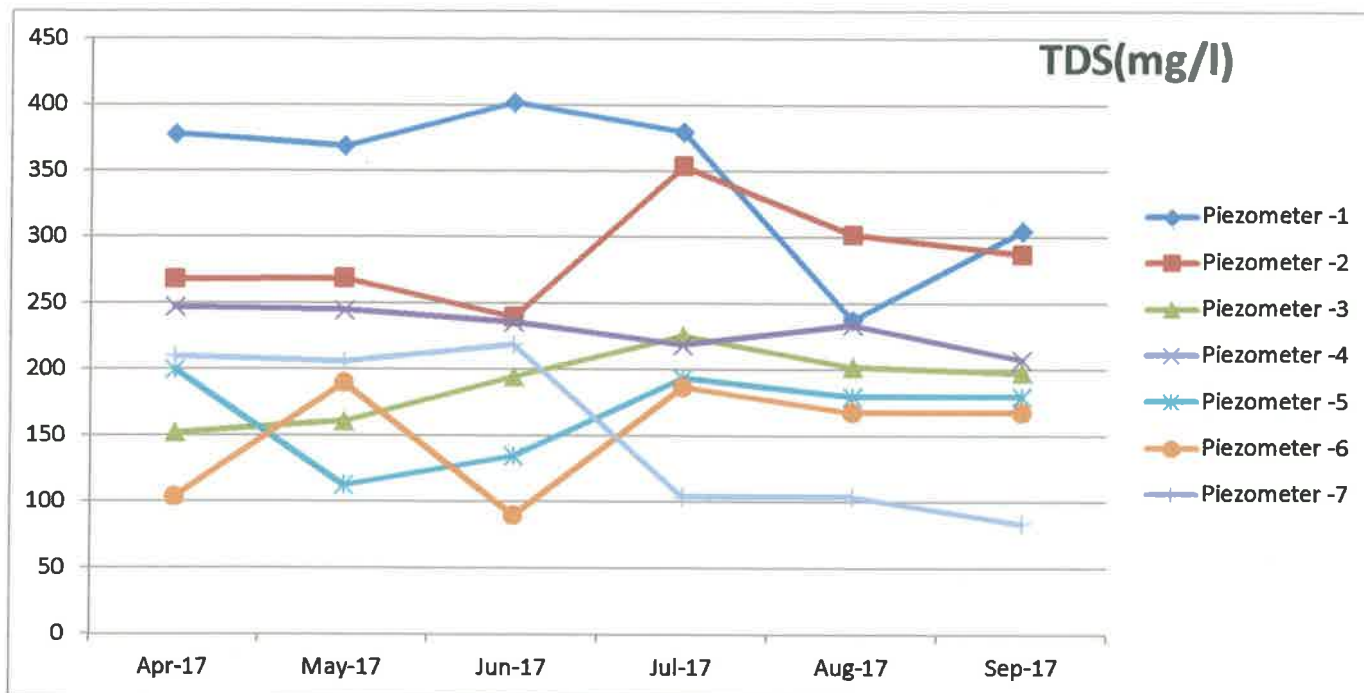
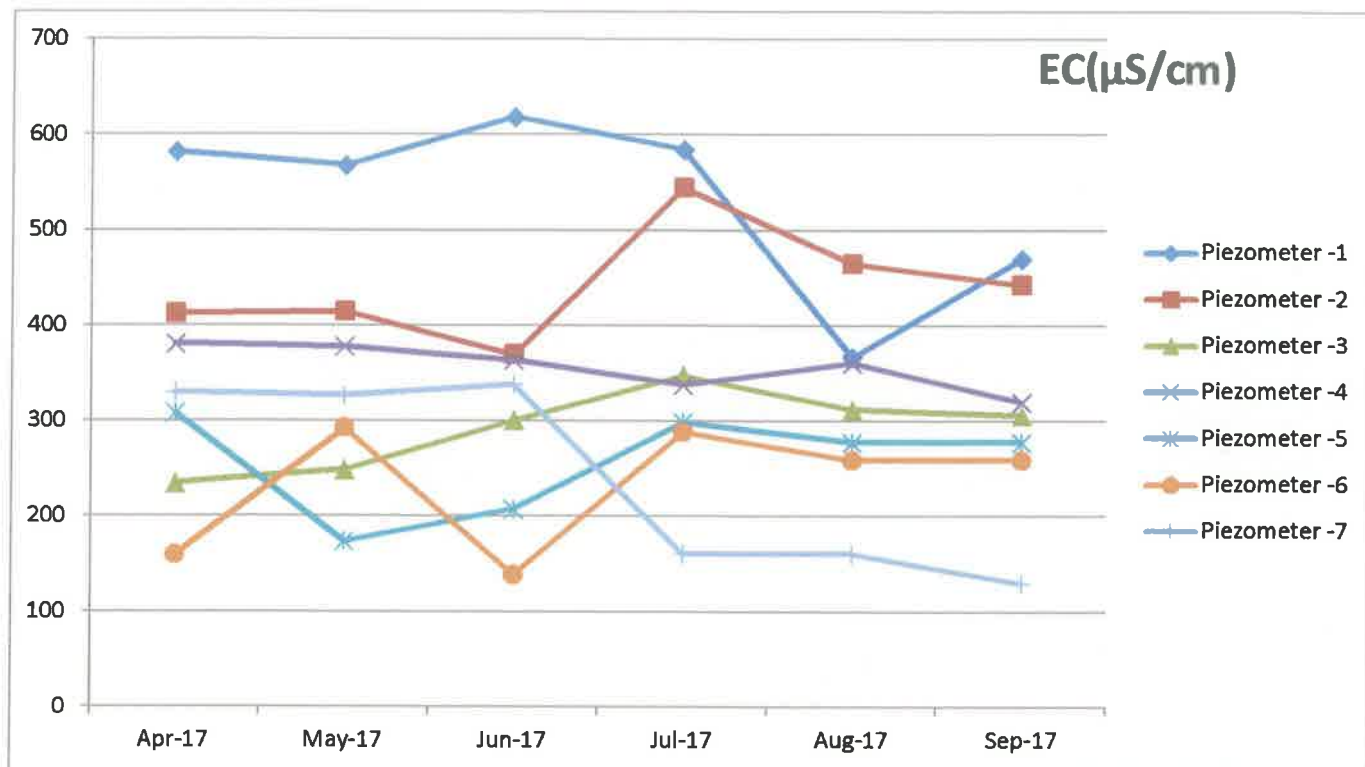
Piezometer Monitoring for the month of May-2017

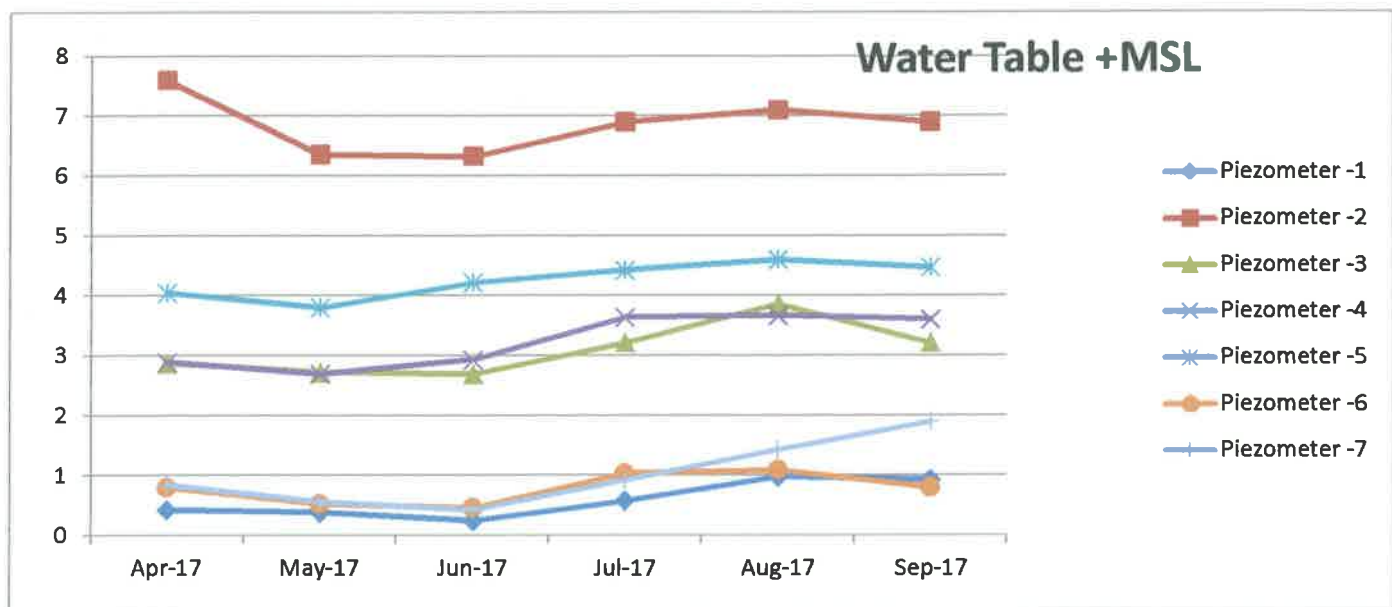
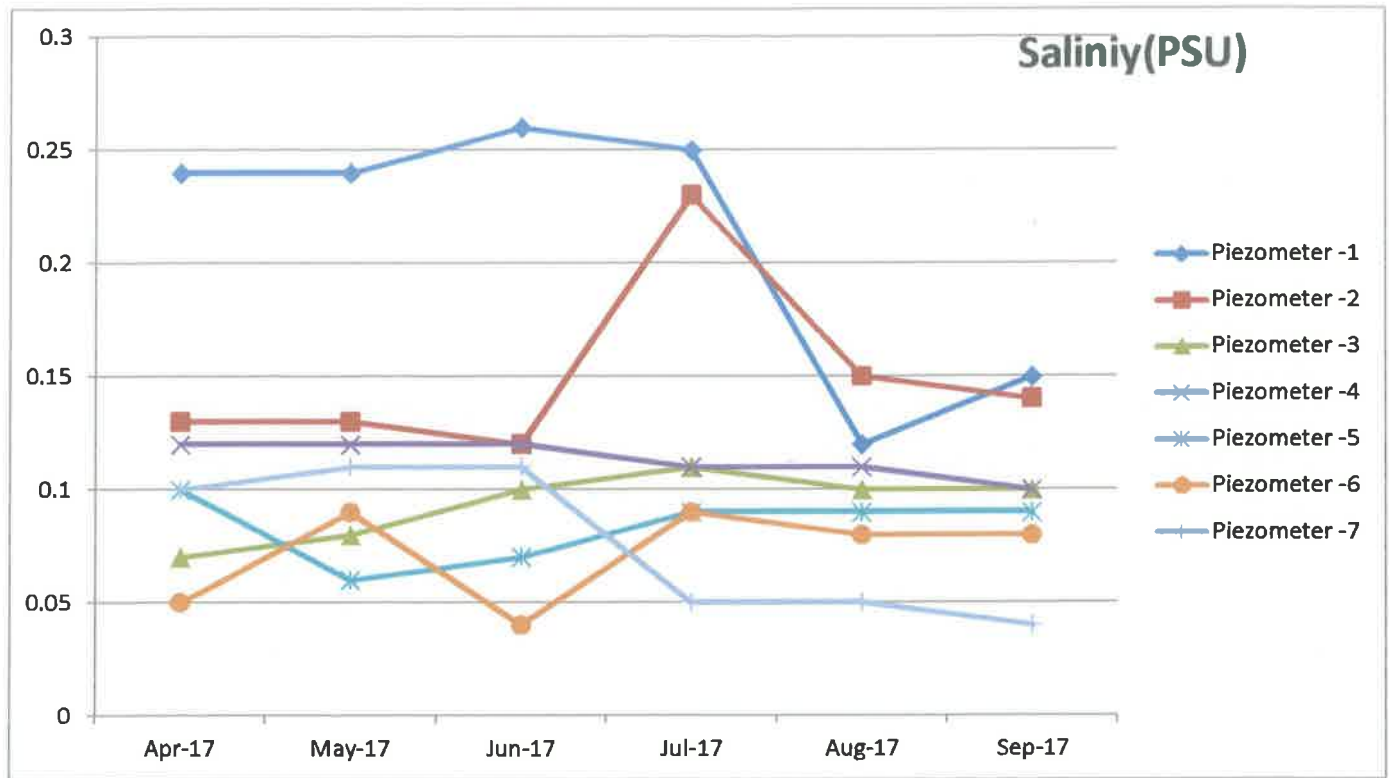
Location	Date	Time	Temp (C)	pH	EC (uS/cm @25C)	TDS (mg/L)	SAL (PSU)	Water Table +MSL
PM-1	31-May-17	10:48:07	29.9	7.86	568	369	0.24	0.378
PM-2	31-May-17	11:33:19	33.3	7.92	415	269	0.13	6.354
PM-3	31-May-17	11:22:55	31.4	7.71	249	161	0.08	2.716
PM-4	31-May-17	11:01:57	32.3	7.8	378	245	0.12	2.690
PM-5	31-May-17	12:05:53	33.3	8.2	174	113	0.06	3.797
PM-6	31-May-17	12:14:19	32.4	7.78	293	190	0.09	0.520
PM-7	31-May-17	11:53:44	34.1	8.11	327	206	0.11	0.550

Piezometer Monitoring for the month of June-2017

Location	Date	Time	Temp (C)	pH	EC (uS/cm @25C)	TDS (mg/L)	SAL (PSU)	Water Table +MSL
PM-1	30-Jun-17	15:35:47	29.7	8.11	619	402	0.26	0.248
PM-2	30-Jun-17	15:18:11	30.1	8.13	370	240	0.12	6.324
PM-3	30-Jun-17	15:09:03	29.3	8.4	301	195	0.1	2.686
PM-4	30-Jun-17	15:47:42	29.5	8.15	364	236	0.12	2.930
PM-5	30-Jun-17	14:05:09	29.2	7.9	208	135	0.07	4.217
PM-6	30-Jun-17	13:51:54	29	8.48	139	90	0.04	0.460
PM-7	30-Jun-17	14:53:26	29.8	8.07	338	219	0.11	0.430









o/c.

Annexure - 12

TSPL/MIN/AERB/17-18/1121

04-11-2017.
Srikakulam.

To
The Director,
Industrial Plant Safety Division,
Atomic Energy Regulatory Board,
Niyamak Bhavan-A, Anushaktinagar,
Mumbai-400 094.

Dear Sir,

We are herewith submitting Quarterly Health Physics Report for Jul to Sep, 2017.

Thanking You,

Yours truly,

Sr. Vice President (Mines)

Trimex Sands Pvt Ltd: Vatchavalasa (V), Gara Mandal, Srikakulam District - 532 404, Andhra Pradesh, India.
Tel: +91 8942 283755, Fax: +91 8942 283758, E-mail: info@trimexsands.com, URL: www.trimexsands.com

CIN : U14299TN2004PTC071437

QUARTERLY HEALTH PHYSICS REPORT FOR NON DAE BEACH SAND MINERALS (BSM) FACILITY

Date: 04-11-2017.

Name of the facility : TRIMEX SANDS PVT LTD.
Location of the facility : SRIKAKULAM, ANDHRAPRADESH.
Period Reporting : Jul.2017 to Sep.2017.

1.0 A). DOSE STATICS (TLD lab report is enclosed)

		No. of persons monitored	Collective dose (person-mSv)	Average Individual dose (mSv)	Maximum Individual dose (mSv)
Quarter	Regular	28	13.25	0.47	0.90
	Temporary	NIL	NIL	NIL	NIL
Cumulative In the year	Regular	30	27.05	0.90	2.05
	Temporary	NIL	NIL	NIL	NIL

1.1 INDIVIDUAL DOSE STATICS

Dose range(mSv)	Number of person in year		
	Regular	Temporary	Total
Less than 2	30	NIL	30
2-6	NIL	NIL	NIL
>6-20	NIL	NIL	NIL
>20-30	NIL	NIL	NIL
>30	NIL	NIL	NIL
Total	30	NIL	30

2.0 MONAZITE ENRICHED TAILINGS DETAILS

	Raw material used (From mines and stock)			Final Products (Which ever is applicable)					Tailings Generated		
	Feed	Pre - Concentration plant output	Procured raw material	Ilmenite	Rutile	Zircon	Garnet	Sillimanite	Silica Rich Tailings		Monazite Enriched Tailings
									Rejects from PCP	Rejects from MSP	
Qty/ Yr (tons)	1010233	161251(*)	----	61705	2070	1240	16342	12956	848982	54713	601
Monazite (%)	0.100	IRZ - 0.616 GA - 0.105 SI - 0.043	---	0.049	0.077	0.193	0.033	0.010	0.037	0.498	60.611

(*) 11624 MT of Concentrate material generated from Pre-Concentration Plant was stored inside the PCP premises.

METHOD OF DISPOSAL OF MONAZITE ENRICHED TAILINGS (Tick whichever is applicable)

- i) ☐ Disposed by backfilling of mined out site
 ii) ☒ Disposed in trenches within the plant boundary
 iii) ☐ Sold to the other BSM facility

3.0 RADIATION MONITORING RESULT (whichever is applicable)

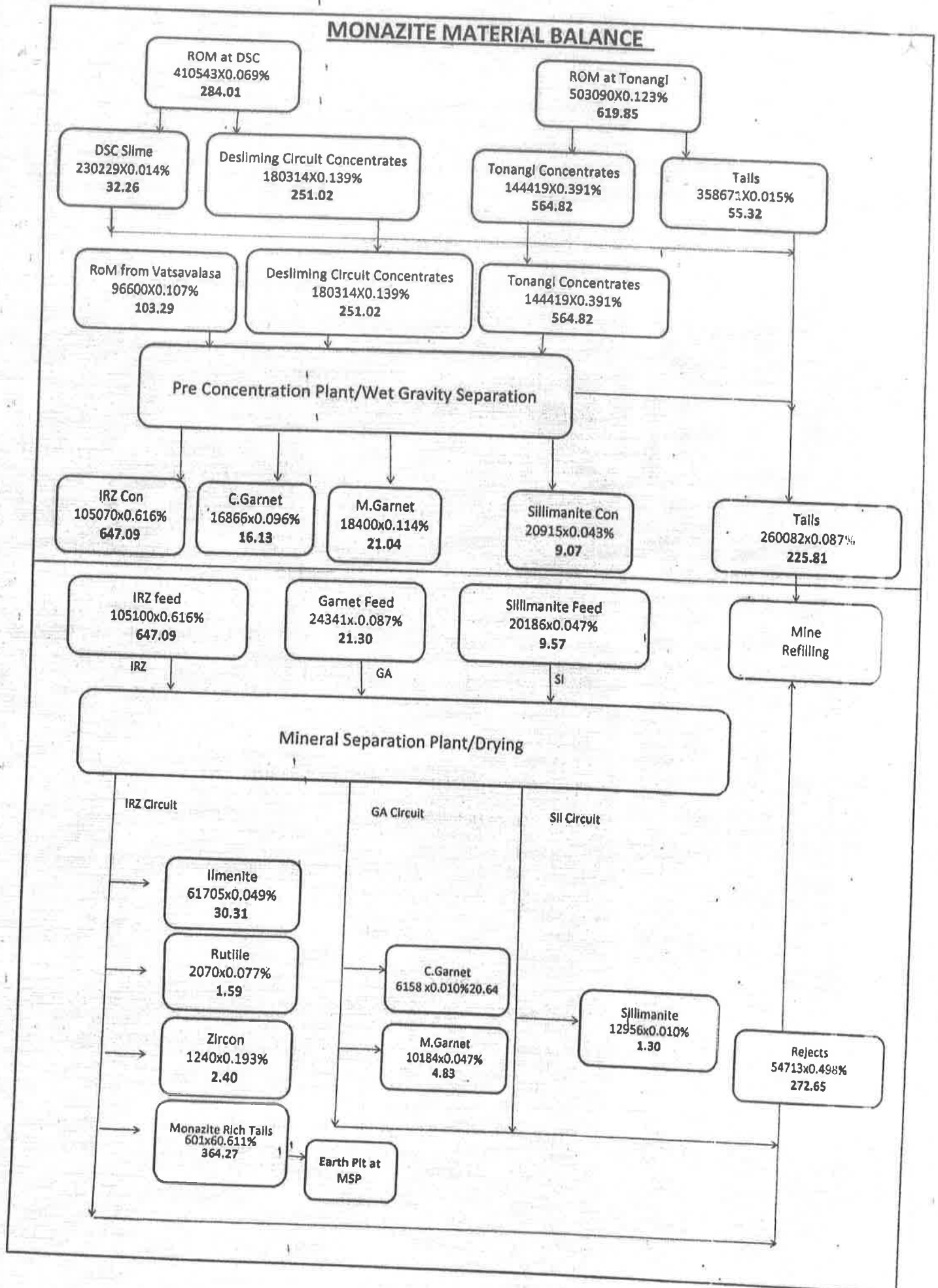
Location	Radiation Level ($\mu\text{Gy/hr}$)
Mining Area	0.5 - 0.7
Backfilled Area	0.1-0.2
Pre Concentration Plant	
• General Background	0.2-0.5
• Raw material Storage	0.5 - 0.7
• Pre Concentration Plant out put	IRZ con : 2 - 3 GA con : 0.1-0.3 SII con : 0.1-0.3
• Pre Concentration Plant Tailings	0.1-0.2
Mineral Separating plant (Physical mineral separation and /or Chemical processing)	
• General Background of plant premises	0.3 - 0.6
• Raw material Storage	IRZ con : 2 - 3 GA con : 0.10 - 0.25 SII con : 0.10 - 0.20
• Inside Mineral Separating plant(eg Magnetic, High tension separators)	0.5 - 0.9
• Monazite Enriched tailings storage area	20-90
• On Top of Trenches filled with monazite enriched tailings and topped with silica rich sand	0.3 - 0.5
• Inside chemical processing plant having minerals separation unit (roaster, calciner, digester, effluent, pipelines like iron oxide slurry pipe lines etc)	-NA-

The table is indicative nature .If necessary; facility may be including other area also.

(Signature of Radiological Safety Officer)
 Signature of the Employer with Official Seal & Date

RADIOLOGICAL SAFETY OFFICE
 TRIMEX SANDS PVT. LTD.,
 VATSAVALASA (V), GARA (M)
 SRIKAKULAM (DIST-532 401, A.P)

MONAZITE MATERIAL BALANCE



AVANTEC LABORATORIES (P) LTD.,
No. 17, Arignar Anna Industrial Estate, Mettukuppam, Vanagaram, Chennai - 600 095.

**Personnel Monitoring
Service**

INSTITUTION No. 015026 **YEAR** 2017
Address TRIMEX SANDS PVT LTD
VATSAVALASA (V), GARA (M),
SRIRAKULAM (DIST),
SRIRAKULAM, ANDHRA PRADESH,
INDIA - 532004
SERVICE FREQUENCY: **Report Date :** 27/10/2017

#	Pers. No.	Name	Worn At	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Current Year	Beta Dose (mSv)	Beta Total (mSv)	Whole Body Dose (mSv)	Whole Body Dose (mSv) ± Total	Wrist Total mSv
1	0006	RAJULM	C	0.00	0.00	0.15	-	0.15	-	-	-	-	-
2	0008	RAMAKRISHNA.P	C	0.05	0.00	0.40	-	0.45	-	-	-	-	-
3	0011	SATYAM.T	C	0.05	0.45	0.60	-	1.10	-	-	-	-	-
4	0013	KAMA RAJU.T	C	0.05	0.55	0.80	-	1.40	-	-	-	-	-
5	0014	RAMA RAO.P	C	0.00	0.00	0.35	-	0.35	-	-	-	-	-
6	0015	VENKATA RAO.P	C	0.05	0.70	0.75	-	1.50	-	-	-	-	-
7	0016	RAMA RAO.T	C	0.00	0.00	0.60	-	0.60	-	-	-	-	-
8	0017	SIMHACHALAM THAMADA	C	0.50	0.50	0.65	-	1.65	-	-	-	-	-
9	0018	RADHA KRISHNAK	C	0.05	0.00	0.50	-	0.55	-	-	-	-	-
10	0019	SIMHACHALAM TELUKUTI	C	0.55	0.25	0.45	-	1.25	-	-	-	-	-
11	0020	RAMA RAO.M	C	1.00	0.35	0.70	-	2.05	-	-	-	-	-
12	0021	NARAYANA RAO.D	C	0.55	0.40	0.50	-	1.45	-	-	-	-	-
13	0022	DANAYAT	C	0.45	0.55	0.70	-	1.70	-	-	-	-	-
14	0023	RAMA RAJU.S	C	0.00	0.00	0.00	-	0.00	-	-	-	-	-
15	0024	SRINIVASA RAO.B	C	0.45	0.50	0.90	-	1.85	-	-	-	-	-
16	0025	BHAGAVAN.D	C	0.00	0.00	0.55	-	0.55	-	-	-	-	-
17	0029	SHRIMY LAPILLI NAGA RAJU	C	0.05	0.65	0.35	-	1.05	-	-	-	-	-
18	0032	SHRI SAMPATHI RAO PRASANNA KL	C	0.00	-	-	-	0.00	-	-	-	-	-
19	0034	Dr. VENKATESHA.B	C	0.00	0.45	0.60	-	1.05	-	-	-	-	-
20	0035	SHRI SHAIK NAZEER	C	0.00	0.00	0.00	-	0.00	-	-	-	-	-
21	0036	SHRI ANVESH MAMIDI	C	0.00	-	-	-	0.00	-	-	-	-	-
22	0037	SHRI APPALA NAIDU.P	C	0.05	0.40	0.30	-	0.75	-	-	-	-	-
23	0038	SHRI BHANOJI RAO.B	C	0.60	0.00	0.60	-	1.20	-	-	-	-	-
24	0039	SHRI RAMA RAO.D	C	0.05	0.55	0.80	-	1.40	-	-	-	-	-
25	0040	SHRI GOVINDA RAO.J	C	0.65	0.50	0.60	-	1.75	-	-	-	-	-
26	0041	SHRI RAMANA MURTHY.CH	C	0.00	0.00	0.10	-	0.10	-	-	-	-	-
27	0042	SHRI TAMADA APPANNA	C	0.55	0.35	0.55	-	1.45	-	-	-	-	-
28	0043	SHRI NARAYANASWAMI.T	C	0.50	0.00	0.50	-	1.00	-	-	-	-	-
29	0044	SHRI RAMA KRISHNAK	C	0.45	0.00	0.25	-	0.70	-	-	-	-	-

#	Pers. Name	Wrist At	Whole Body Dose (mSv)				Eels Dose (mSv)	Beta Total (mSv)	Wrist Dose (mSv) (WQ)+B = Total	Wrist Total mSv
			Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Year			
30	0045 SHRI LINGADESWARA RAOJN	C		0.00	0.00		0.00	-	-	-

Notes:

1. All doses are reported in millisievert (mSv=100mRem).
2. When more than one card is used dose is added.
3. Annual effective dose in any calendar year shall not exceed 30 mSv.
4. " " means in the service period dosimeter not used.
5. " " TLD cards are spoiled or contaminated.

2. No Dose reported for new person unless PDF received.
4. Dose below measurable level for X-RAY=0.05 mSv, BETA=0.50 mSv and GAMMA=0.10 mSv is shown zero.
6. Cumulative effective dose for a block of sliding 5 years (current year + previous 4 years) is 100 mSv.
8. " " means Total dose > 20mSv. Inform details of the radiation work/practice to BARCA/ERB.
10. " " means letter sent regarding over exposure > 100 mSv.

Checked By

Authenticated B

P. AYAPPAN
SR. SCIENTIFIC



TSPL/MIN/AERB/17-18/1098

04-08-2017.
Srikakulam.

To
The Director,
Industrial Plant Safety Division,
Atomic Energy Regulatory Board,
Niyamak Bhavan-A, Anushaktinagar,
Mumbai-400 094.

Dear Sir,

We are herewith submitting Quarterly Health Physics Report for Apr to Jun, 2017.

Thanking You,

Yours truly,

Vice President (Mines)

Trimex Sands Pvt Ltd: Vatchavalasa (V), Gara Mandal, Srikakulam District - 532 404, Andhra Pradesh, India.
Tel: +91 8942 283755, Fax: +91 8942 283758, email: info@trimexsands.com

Hyderabad Office: 2nd Floor, Sri Durga Towers, Plot No. 201, Road No. 10, Banjara Hills, Hyderabad - 500 034, Andhra Pradesh, India.
Tel: +91 40 2338 4380 / 3371 3600 Fax: +91 40 2338 4068

Reg. Office: Trimex Tower, No. 1 Subbaraya Avenue, C.P. Ramaswamy Road, Alwarpet, Chennai - 600 018, Tamilnadu, India.
Tel: +91 44 2498 8822 / 8813 Fax: +91 44 2498 6047 web: www.trimexsands.com

CIN: U14299TN2004PTC071437

QUARTERLY HEALTH PHYSICS REPORT FOR NON DAE BEACH SAND MINERALS (BSM) FACILITY

Date: 04-08-2017.

Name of the facility : TRIMEX SANDS PVT LTD.
Location of the facility : SRIKAKULAM, ANDHRAPRADESH.
Period Reporting : Apr,2017 to Jun,2017.

1.0 A). DOSE STATICS (TLD lab report is enclosed)

		No. of persons monitored	Collective dose (person-mSv)	Average Individual dose (mSv)	Maximum Individual dose (mSv)
Quarter	Regular	28	7.15	0.26	0.70
	Temporary	NIL	NIL	NIL	NIL
Cumulative in the year	Regular	30	13.80	0.46	1.35
	Temporary	NIL	NIL	NIL	NIL

1.1 INDIVIDUAL DOSE STATICS

Dose range(mSv)	Number of person in year		
	Regular	Temporary	Total
Less than 2	30	NIL	30
2-6	NIL	NIL	NIL
>6-20	NIL	NIL	NIL
>20-30	NIL	NIL	NIL
>30	NIL	NIL	NIL
Total	30	NIL	30

2.0 MONAZITE ENRICHED TAILINGS DETAILS

	Raw material used (From mines and stock)			Final Products (Which ever is applicable)					Tailings Generated		
	Feed	Pre - Concentration plant output	Procured raw material	Ilmenite	Rutile	Zircon	Garnet	Sillimanite	Silica Rich Tailings		Monazite Enriched Tailings
									Rejects from PCP	Rejects from MSP	
Qty/ Yr (tons)	1148974	179006(*)	---	68546	2152	1290	13109	12168	969968	71104	695
Monazite (%)	0.095	IRZ - 0.666 GA - 0.105 SI - 0.043	---	0.050	0.076	0.193	0.028	0.010	0.027	0.466	63.539

(*) 9942 MT of Concentrate material generated from Pre-Concentration Plant was stored inside the PCP premises.


METHOD OF DISPOSAL OF MONAZITE ENRICHED TAILINGS (Tick whichever is applicable)

- i) Disposed by backfilling of mined out site
 ii) ☒ Disposed in trenches within the plant boundary
 iii) Sold to the other BSM-facility

3.0 RADIATION MONITORING RESULT (whichever is applicable)

Location	Radiation Level ($\mu\text{Gy/hr}$)
Mineral Area	0.5 - 0.7
Backfilled Area	0.1-0.2
Pre Concentration Plant	
• General Background	0.2-0.4
• Raw material Storage	0.5 - 0.7
• Pre Concentration Plant out put	IRZ con : 2 - 3 GA con : 0.1-0.3 Sil con : 0.1-0.3
• Pre Concentration Plant Tailings	0.1-0.2
Mineral Separating plant (Physical mineral separation and /or Chemical processing)	
• General Background of plant premises	0.3 - 0.5
• Raw material Storage	IRZ con : 2 - 3 GA con : 0.2 - 0.4 Sil con : 0.1 - 0.3
• Inside Mineral Separating plant(eg Magnetic, High tension separators)	0.6 - 0.9
• Monazite Enriched tailings storage area	40-90
• On Top of Trenches filled with monazite enriched tailings and topped with silica rich sand	0.3 - 0.5
• Inside chemical processing plant having minerals separation unit (roaster, calciner, digester, effluent, pipelines like iron oxide slurry pipe lines etc)	-NA-

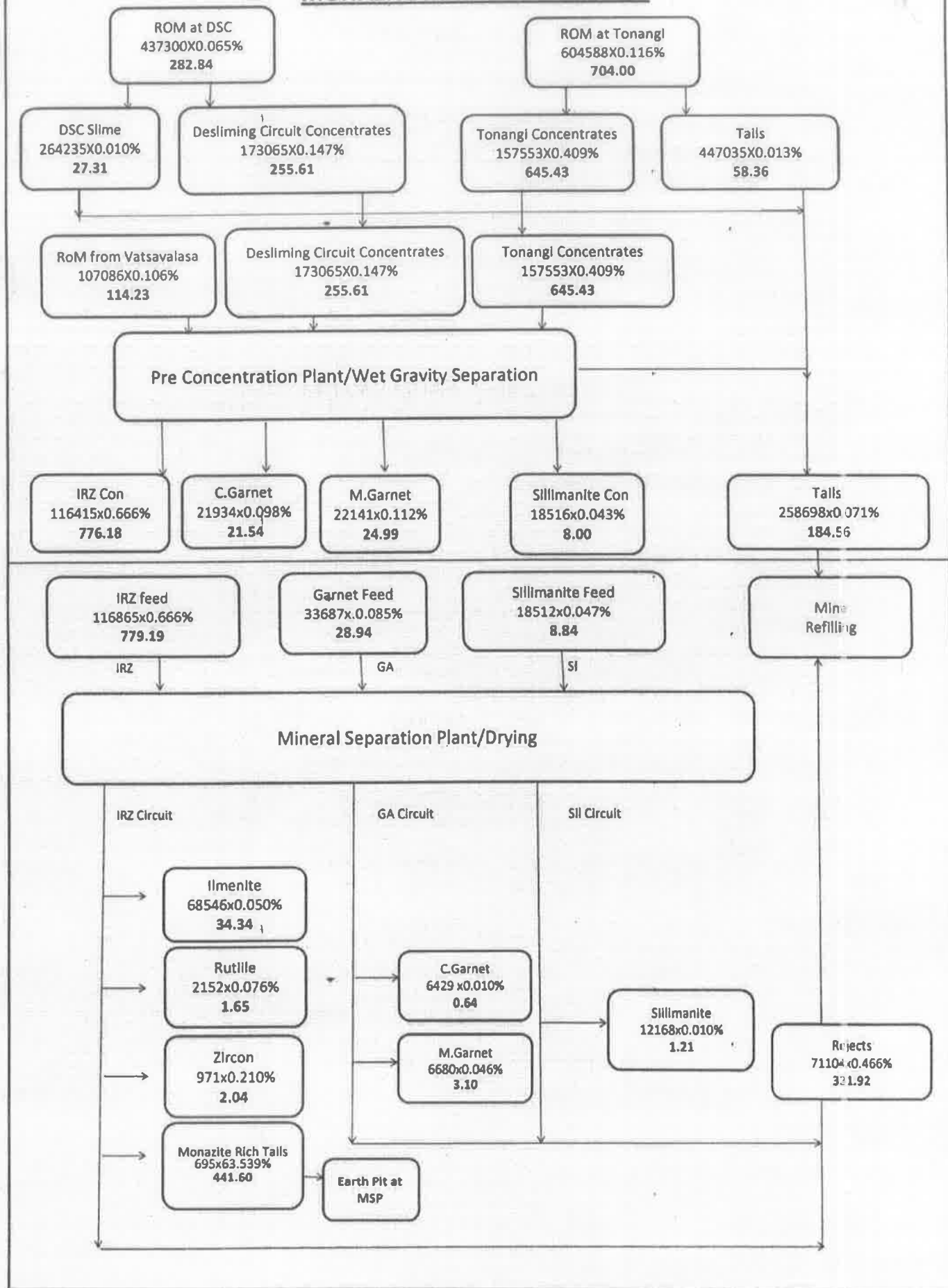
The table is indicative nature .If necessary; facility may be including other area also.



(Signature of Radiological Safety Officer)
 Signature of the Employer with Official Seal & Date

RADIOLOGICAL SAFETY OFFICER
TRIMEX SANDS PVT LTD.,
VATSAVAI 45A (V), GARA (M)
SRIKAKULAM DIST-532 404, A.P

MONAZITE MATERIAL BALANCE



AVANTTEC LABORATORIES (P) LTD.,

No. 17, Arignar Anna Industrial Estate, Mettukuppam, Vanagaram, Chennai - 600 095.

Personnel Monitoring Service DOSE REPORT

Institution No. : 015026
Address : TRIMEX SANDS PVT LTD
VATSALVASA (N), GARA (M),
SRIRAKULAM (DIST),
SRIRAKULAM, ANDHRA PRADESH,
INDIA - 532404

SERVICE FREQUENCY : QUARTERLY
Report Date : 03/09/2017
YEAR : 2017

Sl. No.	Person Name	Wt (kg)	Jst-Mth	Apr-Jun	Whole Body Dose (mSv)			Current Year Total	Beta Dose (mSv)	Beta Total (mSv)	Whole Dose (mSv) = (2)(9)+(3) Total	Whole Total mSv
					Jul-Sep	Oct-Dec						
1	0006 RAJUM	C	0.00	0.00	-	-	0.00	-	-	-	-	-
2	0008 RAMAKRISHNA.P	C	0.05	0.00	-	-	0.05	-	-	-	-	-
3	0011 SATYAK.T	C	0.05	0.45	-	-	0.50	-	-	-	-	-
4	0013 KAMA RAJUL.T	C	0.05	0.55	-	-	0.60	-	-	-	-	-
5	0014 RAMA RAO.P	C	0.00	0.00	-	-	0.00	-	-	-	-	-
6	0015 VENKATA RAO.P	C	0.05	0.70	-	-	0.75	-	-	-	-	-
7	0016 RAMA RAO.T	C	0.00	0.00	-	-	0.00	-	-	-	-	-
8	0017 SIMACHALAM THAMADA	C	0.50	0.50	-	-	1.00	-	-	-	-	-
9	0018 RADHA KRISHNA.K	C	0.05	0.00	-	-	0.05	-	-	-	-	-
10	0019 SIMACHALAM TELUKUTI	C	0.55	0.25	-	-	0.80	-	-	-	-	-
11	0020 RAMA RAO.M	C	1.00	0.35	-	-	1.35	-	-	-	-	-
12	0021 NARAYANA RAO.D	C	0.55	0.40	-	-	0.95	-	-	-	-	-
13	0022 DANAYYA.T	C	0.45	0.55	-	-	1.00	-	-	-	-	-
14	0023 RAMA RAJUS	C	0.00	0.00	-	-	0.00	-	-	-	-	-
15	0024 SRINIVASA RAO.B	C	0.45	0.50	-	-	0.95	-	-	-	-	-
16	0025 BHAGAVAND	C	0.00	0.00	-	-	0.00	-	-	-	-	-
17	0029 SRILAKSHMI NAGA RAJU	C	0.05	0.65	-	-	0.70	-	-	-	-	-
18	0032 SHRI.SAMPATHI RAO PRASANNA K.	C	0.00	-	-	-	0.00	-	-	-	-	-
19	0034 DR.VENKATESHA.B	C	0.00	0.45	-	-	0.45	-	-	-	-	-
20	0035 SHRI.SHAIR NAZEER	C	0.00	0.00	-	-	0.00	-	-	-	-	-
21	0036 SHRI.LAVESH MAMIDI	C	0.00	-	-	-	0.00	-	-	-	-	-
22	0037 SHRI.APPALA MADU.P	C	0.05	0.40	-	-	0.45	-	-	-	-	-
23	0038 SHRI.BHANOJI RAO.B	C	0.60	0.00	-	-	0.60	-	-	-	-	-
24	0039 SHRI.RAMA RAO.D	C	0.05	0.55	-	-	0.60	-	-	-	-	-
25	0040 SHRI.GOVINDA RAO.J	C	0.65	0.50	-	-	1.15	-	-	-	-	-
26	0041 SHRI.RAMAIA MURTHY.CH	C	0.00	0.00	-	-	0.00	-	-	-	-	-
27	0042 SHRI.TAMADA APPANNA	C	0.55	0.35	-	-	0.90	-	-	-	-	-
28	0043 SHRI.NARAYANASWAMI.T	C	0.50	0.00	-	-	0.50	-	-	-	-	-
29	0044 SHRI.PAMA KRISHNA.K	C	0.45	0.00	-	-	0.45	-	-	-	-	-

Insulation No.: 015025

#	Para. Name	Worn At	Whole Body Dose (mSv)				Rate Dose (mSv)	Birth Total (mSv)	Wife Dose Total (mSv) = $\frac{Dose}{1000}$	Wife Total mSv
			Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec				
30	0045	SHRIJAGADESWARA RAO.N	C	0.00			0.00	—	—	—

Notes:

1. All doses are reported in millirem (1 mSv = 100 mRem).
2. No Dose reported for new person unless PDF received.
3. When more than one card is used, dose is added.
4. Dose below measurable level for X-RAY = 0.05 mSv, BETA = 0.50 mSv and GAMMA = 0.10 mSv is shown zero.
5. Annual effective dose in any calendar year shall not exceed 30 mSv.
6. Cumulative effective dose for a block of sliding 5 years (current year + previous 4 years) is 100 mSv.
7. " " means Total dose > 20 mSv. Inform details of the radiation work/practice to BARC/AERB.
8. " " means later said regarding over exposure > 100 mSv.
9. " " TLD cards are spoilt or contaminated.

Checked By

Authenticated By

P. V. APPAN
SR. SCIENTIFIC OFFICER



ANDHRA PRADESH POLLUTION CONTROL BOARD

Paryavarana Bhavan, A-III, Industrial Estate,
Sanathnagar, Hyderabad-500 018

Phone : 040-23887500

Website : www.appcb.ap.nic.in

Annexure - 13

RED CATEGORY CONSENT & AUTHORISATION ORDER BY REGISTERED POST WITH ACKNOWLEDGEMENT DUE

Consent Order No : APPCB/VSP/VZM/152/HO/CFO/2015

Date : 30.10.2015

Consent Order for Existing/New or altered discharge of sewage and/or trade effluents/outlet under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and amendments thereof, Operation of the plant under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Renewal of Authorisation under Rule 5 of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 & Amendments thereof.

CONSENT is hereby granted under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974, under section 21 of Air (Prevention & Control of Pollution) Act 1981 and Authorisation under the provisions of HW (MH & TM) Rules, 2008 (hereinafter referred to as 'the Acts', 'the Rules') and the rules and orders made thereunder to:

M/s. Trimex Sands Pvt., Ltd.,
(After Expansion)
(Beach Sand Mining, Wet Plant & Mineral Separation Plants),
Vatsavalasa (V) and Tonangi(V), Gara (M),
Srikakulam District – 532 001
E-mail: info@trimexsands.com

(hereinafter referred to as 'the Applicant') authorizing to operate the industrial plant to discharge the effluents from the outlets and the quantity of Emissions per hour from the chimneys as detailed below:

i) Out lets for discharge of effluents:

Outlet No.	Outlet Description	Max Daily Discharge KLD	Point of Disposal
Wet Plant, Tonangi(V):			
1.	Process (Outlet of Thickener)	1500	For disposal into mined out area of the industry.
2.	Domestic	2	Septic tank followed by soak pit.
Mineral Separation Plant / Wet Plant, Vatsavalasa(V):			
3.	Process (Outlet of Thickener)	4050	For disposal into mined out area of the industry.
4.	Domestic	15	Septic tank followed by soak pit.
Sand Mining			
5	Domestic	3	STP / Septic tank followed by soak pit

ii) Emissions from chimneys:

Chimney No.	Description of Chimney	Quantity of Emissions at peak flow
Mineral Separation Plant / Wet Plant, Vatsavalasa(V):		
1.	Attached to 70 TPH FBD-I (IRZ Section)	--
2.	Common stack attached to 15 TPH FBD-2 (Garnet Section), 15 TPH FBD-3 (Sillimanite Section) and 2 TPH FBD-4 (Zircon Section)	--
3.	Attached to 25 TPH FBD-1 (Garnet Section)	--

4.	Attached to 6 TPH FBD-2 (Sillimanite / Ball Mill Section)	--
5.	Attached to 10 TPH FBD-3 (Sillimanite sintering)	--
6.	Attached to 200 KVA D.G. Set	--
7.	Attached to 4 x 1500 KVA D.G. Sets	--
8.	Attached to 2000 KVA D.G. Set	--
9.	Attached to 315 KVA D.G. Set	--
Wet Plant, Tonangi(V):		
10.	Attached to 2000 KVA D.G. Set	--

iii) HAZARDOUS WASTE AUTHORISATION (FORM – II) [See Rule 5 (4)]:

M/s. Trimex Sands Pvt., Ltd., (Beach Sand Mining, Wet Plant & Mineral Separation Plant), Vatsavalasa (V) & Tonangi(V), Gara (M), Srikakulam District is hereby granted an authorization to operate a facility for collection, reception, storage, treatment, transport and disposal of Hazardous Wastes namely:

• **HAZARDOUS WASTES WITH RECYCLING OPTION:**

S. No.	Name of the hazardous waste	Stream	Quantity	Disposal option
1	Waste lubricant oil	5.1 of Schedule – I	430 LPM	To Authorised Reprocessors / Recyclers.

This consent order is valid to manufacture the following products with quantities indicated only:

S.No.	Product	Quantity
1.	Ilmenite	1100 TPD
2.	Sillimanite / Flour / Mulite	550 TPD
3.	Garnet	550 TPD
4.	Rutile	44 TPD
5.	Zircon	44 TPD
6.	Mineral Rich Tailings	260 TPD
	Total	2548 TPD (0.93 million TPA)
Beach Sand Mining:		
1.	Mining of Raw Sand	6.0 Millions TPA

This order is subject to the provisions of 'the Acts' and the Rules' and orders made thereunder and further subject to the terms and conditions incorporated in the schedule A, B & C enclosed to this order.

This combined order of consent & Hazardous Waste Authorisation shall be valid for a period ending with the 31st day of May, 2018.

Sd/-
MEMBER SECRETARY

To
M/s. Trimex Sands Pvt., Ltd.,
(Beach Sand Mining, Wet Plant & Mineral Separation Plants),
Vatsavalasa (V), Tonangi(V), Gara (M),
Srikakulam District – 532 001

Copy to:

1. The JCEE, Zonal Office, Visakhapatnam for information and necessary action.
2. The JCEE (Cess), APPCB, Hyderabad for information.
3. The JCEE(HWM), APPCB, Hyderabad for information.
4. The Environmental Engineer, Regional Office, Vizianagaram for information and necessary action.

o/c
//T.C.F.B.O//
31/10/15
JOINT CHIEF ENVIRONMENTAL ENGINEER
UNIT HEAD - IV

SCHEDULE - A

1. The applicant shall make applications through Online for renewal of Consent (under Water and Air Acts) and Authorization under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts for obtaining Consent & HW Authorization of the Board and detailed compliance of CFO conditions.
2. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.
3. The facility shall immediately submit the revised application for consent to this Board in the event of any change in activity, quantity of trade effluents & quantity of emissions etc.
4. The applicant shall not change or alter either the quality or the quantity or the rate of the discharge or the route of discharge and shall not change or alter either the prescribed quality or the rate of emission without the previous written permission of the Board.
5. The applicant shall, not later than 30 days from the date of issue of this consent order, certify in writing to the Board that the applicant has installed or provided for an alternative electric power source sufficient to operate all facilities installed by the applicant, to comply with the terms and conditions of this consent. In absence of alternative electric power source sufficient to operate all facilities installed by the applicant, to comply with the terms and conditions of this consent, production shall be stopped.
6. Any up-set condition in any plant/plants of the facility, which result in, increased effluent discharge and/ or violation of standards stipulated in this order or the emission of any Air Pollutant into the environment in excess of the standards laid down by the Board, occurs or is apprehended to occur due to accident, or other unforeseen act or event, the person-in-charge of the premises, from where such discharge / emission occurs or is apprehended to occur shall forthwith intimate the fact of such occurrence or the apprehension of such occurrence to this Board, by fax / email under intimation to the Collector and District Magistrate.
7. In case of such episodal discharges / emissions mentioned in item 4 above, the facility shall take immediate action to bring down the discharge / emission below the limits prescribed in this order.
8. A good house keeping shall be maintained both within the facility and in the premises. All hoods, pipes, valves, sewers and drains shall be leak proof. Floor washings shall be admitted into the effluent collection system only and shall not be allowed to find their way into storm drains or open areas.
9.
 - a) The facility shall carryout analysis of waste water discharges or emissions through chimneys, for the parameters mentioned in Schedule – B of this order at regular intervals.
 - b) The facility shall maintain following records to accessible to the Board, whenever required.
 1. Analysis reports of waste water/ emissions.
 2. Log book for operation of pollution control systems.
 3. Inspection book
10. Separate power connection with energy meter shall be provided for the Pollution Control Equipments and record of power consumption and chemicals consumption for the operation of pollution control equipment shall be maintained separately.
11. The applicant shall comply with the directives/orders issued by the Board in this order and at all subsequent times without any negligence on his part. The applicant shall be liable for such legal action against him as per provisions of the Law/Act in case if non-compliance of any order/directive issued at any time and/or violation of the terms and conditions of this consent order.
12. The applicant shall furnish to the visiting officer and / or the Board any information regarding the construction, installation or operation of the effluent treatment system / air

- pollution control equipment / secured storage area of Hazardous Waste and such other particulars as may be pertinent for preventing and controlling pollution.
13. The facility is liable to pay compensation for any environmental damage caused by it, as fixed by the Collector and District Magistrate as Civil liability.
 14. All the rules & regulations notified by Ministry of Environment and Forests, Government of India in respect of management, handling, transportation and storage of hazardous chemicals and wastes shall be followed.
 15. All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991 shall be followed.
 16. The occupier shall educate the workers and nearby public of possible accidents and remedial measures.
 17. For any accident or spillage of hazardous wastes causing damage to the Environment, the occupier or the transporter as the case shall be held responsible.
 18. In case of closure of facility, the un-used/not consumed raw materials falling under the category of Hazardous Chemicals and mentioned in Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and Amendment Rules, 2003 shall be removed and sold to other units within 90 days from the date of closure to prevent any possibility of occurrence of an accident. In case the above hazardous chemicals have lost their properties originally acquired, then they shall be treated, as Hazardous Waste and they shall be disposed off only to the agencies authorized by APPCB in a safe manner.
 19. The occupier shall prepare/update Emergency preparedness plan for safe handling of hazardous waste from time to time and submit the same to APPCB. Emergency preparedness plan must be implemented immediately whenever there is fire, explosion or release of hazardous waste or hazardous waste constituents, which could endanger to human health or environment.
 20. Packaging, labeling and transportation of Hazardous Wastes shall be in accordance with the provisions of the rules issued by the Central Govt. under the Motor Vehicles Act, 1988 and other guidelines issued from time to time. The packaging and labeling shall be based on the composition and hazardous constituent of the waste, however all Hazardous Waste containers shall be provided with a general label.
 21. The driver who transports Hazardous Waste shall be well acquainted about the procedure to be followed in case of an emergency during transit. The transporter shall carry a Transport Emergency (TREM) Card (as given in the guidelines for management and handling of hazardous wastes) duly filled by the Hazardous Waste generator.
 22. No Hazardous Wastes shall be mixed with any other wastes or shall be discharged to a common, other internal, external sewerage or other drainage system without prior approval of APPCB.
 23. If HDPE bags are used for storing Hazardous Wastes, it shall be ensured that they are perfectly sealed mechanically or double hot sealed. If MS/HDPE bags or drums are used for storing Hazardous Wastes, these drums / bags shall be ensured that they are perfectly sealed.
 24. The person authorized shall not rent, lend, sell, transfer their industrial premises without obtaining prior permission of the State Pollution Control Board.
 25. Any authorization change in personnel, equipment as working condition as mentioned in the application by the person authorized shall constitute a breach of his authorization.
 26. The facility shall comply with the provisions of Batteries (Management & Handling) Rules, 2001.
 27. The facility shall put up two sign boards (6x4 ft. each) at publicly visible places at the main gate. The first sign board shall provide information on specific conditions of CFO and Hazardous Waste Authorisation. The second sign board shall display online data on quantity and nature of hazardous chemicals being used in the plant, as well as water, air emissions and solid waste generated within the factory premises.
 28. The applicant shall exhibit the Consent & HW Authorisation order of the Board in the factory premises at a prominent place for the information of the inspecting officers of different departments.
 29. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves the right and powers under Section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 and its amendments thereof and under Section 21 of the

Air (Prevention & Control of Pollution) Act, 1981 and its amendments thereof to review any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.

30. The Authorization issued under Hazardous Waste (Management, Handling & Transboundary Movement) Rules, 2008 and its amendments thereof, shall comply with the provision of the Environment (Protection) Act, 1986.

SCHEDULE - B

1. The industry shall handover the original Consent order No. APPCB/VSP/VZM/152/HO/CFO/2015-460, dated 21.04.2015, having validity upto 31.05.2018, to the RO, Vizianagaram after receipt of this order. The same stands cancelled from the date of receipt of this order.
2. The water consumption quantities of the facility are mentioned below:

S.No	Purpose	Sand Mine	Quantity (Wet Plant at Vatsavalasa)	Quantity (Mineral Separation plant)	Wet Plant at Tonangi
1.	Process (Makeup)	--	11619 KLD	275 KLD	3000 KLD
2.	Spraying in Stock Yard & Wetting the Roads	20.0	10 KLD	10 KLD	10 KLD
3.	Gardening / Irrigation	--	5 KLD	15 KLD	5 KLD
4.	Domestic Canteen	6.0 KLD	6 KLD	20 KLD	4 KLD
Total		26.0 KLD	11640 KLD	320 KLD	3019 KLD

The industry shall maintain separate meters with necessary pipe-line for assessing the quantity of water used for each purpose at each Plant and maintain records.

3. The industry shall file the water cess returns in Form-I as required under section (5) of Water (Prevention and Control of Pollution) Cess Act, 1977 on or before the 5th of every calendar month, showing the quantity of water consumed in the previous month along with water meter readings. The industry shall remit water cess as per the assessment orders as and when issued by Board.
4. The industry shall comply with emission limits for DG sets of capacity upto 800 KW as per the Notification G.S.R.520 (E), dated 01.07.2003 under the Environment (Protection) Amendment Rules, 2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Second Amendment Rules, 2004. In case of DG sets of capacity more than 800 KW shall comply with emission limits as per the Notification G.S.R.489 (E), dated 09.07.2002 at serial no.96, under the Environment (Protection) Act, 1986.
5. The industry shall comply with ambient air quality standards of PM₁₀ (Particulate Matter size less than 10µm) - 100 µ/ m³; PM_{2.5} (Particulate Matter size less than 2.5 µm) - 60 µg/ m³; SO₂ - 80 µg/ m³; NO_x - 80 µg/m³, outside the factory premises at the periphery of the industry.

Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009 shall be complied. Following standards prescribed for noise shall be complied.

Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A)

Night time (10 PM to 6 AM) - 70 dB (A).

6. The industry shall not manufacture any product / activity, other than those mentioned in this order.
7. The industry shall submit the time bound action plan for backfilling of 6000 Tons of waste sand available at Vatsavalsa dry plant in the mined out areas.
8. The industry shall provide separate water meters with necessary pipeline Plant wise for assessing the quantity of water used for each of the purposes mentioned below.
 - a. Industrial cooling, boiler feed.

- b. Domestic purposes.
 - c. Processing, whereby water gets polluted and pollutants are easily biodegradable.
 - d. Processing, whereby water gets polluted and pollutants are not easily biodegradable.
9. The industry shall maintain the following records and the same shall be made available to the Board Officials during the inspection.
 - a. Daily production details, RG-I records and Central Excise Returns.
 - b. Quantity of Effluents generated, recycled and disposed.
 - c. Log Books for pollution control systems.
 - d. Daily solid waste generated and disposed.
10. Thick green belt shall be maintained Plant wise with tall growing trees in atleast 33% of total area in the vacant spaces of the unit.
11. A network of observation wells within and outside the lease area shall be maintained for regular monitoring of ground water quality and ground water table.
12. A network of observation wells within and outside the lease area shall be maintained for regular monitoring of ground water quality and ground water table.
13. The industry shall comply with EC conditions dated 17.04.2015 and CFE conditions dated 23.06.2015.
14. The industry shall maintain the compliance of directions issued by the Board from time to time.
15. The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments.
16. The conditions stipulated are without prejudice to the rights and contentions of this Board in any Hon'ble court of Law.

Wet & Dry Plants, Vatsavalasa(V):

17. The emissions shall not contain constituents in excess of the prescribed limits mentioned below:

Chimney No.	Parameter	Emission Standards
1 to 5	Particulate matter	115mg/Nm ³

18. The industry shall maintain separate energy meter for Effluent Treatment Plant (ETP) i.e., for sludge thickener and for air pollution control equipment.
19. The industry shall submit performance evaluation / efficiency of the Air Pollution Control Systems installed on quarterly basis.
20. The industry shall not cause dust / air pollution to surrounding environment during transportation of mined sand. Industry shall provide water sprinklers at raw material handling section for dust suppression.
21. The industry shall not discharge any effluents into Perlavanipet agricultural fields.
22. The industry shall maintain green belt in the mined area after leveling and towards sea side on reclaimed mined area.
23. The industry shall operate water sprinklers to control fugitive emissions at different transfer points and haul roads.
24. The industry shall maintain water sprinklers at raw material handling section for dust suppression and maintain records.
25. All transit water storage facilities shall be maintained with impervious lining to prevent pollution.
26. The thickener sludge / sand shall be disposed for back filling in mined out areas.
27. Total generation of Silica sand (Plant Tails) from the Wet Plants at Vatsavalasa and Tonangi shall not exceed 5.07 Million TPA. The plant tails shall be used for backfilling the mined out areas by transportation/pumping in the form of slurry and stock piling.

Wet Plant, Tonangi(V):

28. Water sprinklers shall be maintained for dust suppression.
29. The industry shall not discharge any effluent to outside the premises.
30. The industry shall control fugitive emissions generated at different transfer points and material storage and handling system.
31. The industry shall maintain water sprinklers at raw material handling section for dust suppression and maintain records.
32. All transit water storage facilities shall be provided with impervious lining to prevent pollution.
33. The thickner sludge / sand shall be disposed for back filling in mined out areas. The industry shall submit mine plan and back filling plan to RO, Vizianagaram.
34. The industry shall not cause dust / air pollution to surrounding environment during transportation of mined sand.

Beach Sand Mining, Vatsavalasa(V), Gara(M):

35. The industry shall submit the mining plan as well as back filling plan. The industry shall dispose the OB dump in the mined area only for back filling and shall not dump in unauthorized places.
36. The mining shall be in accordance with the mining plan approved by AMD & IBM.
37. The industry shall not carryout mining towards inter tidal area and within 100 Mts. from HTL towards landward side as stipulated in the EC order dated 17.04.2015.
38. The industry shall carryout radiation survey regularly as per statutory requirement.
39. The industry shall not cause dust / air pollution to the surrounding environment during transportation of mined sand.
40. The industry shall comply with the following:

Existing: Wet & Dry Plants

S. No.	Type of solid Waste	Source of Generation	Quantity at Vatsavalasa	Quantity at Tonangi	Sand Mine	Dry plant	Method of Disposal
1	Silica tailing containing low grade Minerals	Process	2433 TPD	2433 TPD	----	-----	Back filling in mined out areas
2	Thickener Sludge (Slurry)	Thickener	2000 KLD	1000 KLD	----	50 KLD	Back filling in mined out areas
3	Waste Lubricating Oil (Hazardous)	DG Set / Gear Boxes	100 LPM	100 LPM	10 LPM	100 LPM	To disposed to authorized agencies
4	Mineral Rich Tails from Dry mill of Mineral Separation plant		Non-Hazard	-----		170 TPD	Back filling in mined out areas

After Expansion: Wet Plant-I & II

S. No.	Solid Waste generated from	Exist-ing	Expansion Quantity	Total	Method of disposal
1.	Silica Sand (Plant Tails) from Wet mill of Pre-concentration plants	4867 TPD (1.77 MTPA)	3.30 MTPA	5.07 MTPA	Reused for back filling the mined out areas by transportation/ pumping in the form of slurry and stock piling.

2.	Mineral Rich Tails from Dry mill of Mineral Separation plant	170 TPD(0.062 MTPA)	0.032 MTPA	0.094 MTPA	
3.	Waste Lubricating Oil (Hazardous)	310 LPM	120 LPM	430 LPM	To be disposed to authorized agencies

41. During initial mining stages, a green belt of width 7.5 m. shall be developed all around the mine lease boundary. Subsequently to develop 50m barrier zone with 5-tier plantation inside mine lease in a progressive way near the active mining sites as specified in the EC order dt. 17.04.2015.
42. Fencing of entire lease area, barrier of 100m towards sea shall be done to protect Olive Turtle nesting ground.
43. The proponent shall obtain all clearances from all competent authorities.

SCHEDULE - C

[see rule 5(4)]

[CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR HANDLING HAZARDOUS WASTES]

1. The industry shall give top priority for waste minimization and cleaner production practices.
2. The industry shall not store hazardous waste for more than 90 days as per the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and amendments thereof.
3. The industry shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal.
4. The industry shall not dispose Waste oils to the traders and the same shall be disposed to the authorized Reprocessors/ Recyclers.
5. The industry shall dispose Used Lead Acid Batteries to the manufacturers / dealers on buyback basis.
6. The industry shall not dispose spent solvents / mixed spent solvents to the traders.
7. The industry shall take necessary practical steps for prevention of oil spillages and carry over of oil from the premises.
8. The industry shall maintain 6 copy manifest system for transportation of waste generated and a copy shall be submitted to Board Office and concerned Regional Office.
9. The industry shall maintain good house keeping & maintain proper records for Hazardous Wastes stated in Authorisation.
10. The industry shall maintain proper records for Hazardous Wastes stated in Authorisation in FORM-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 22(2) of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and amendments thereof.
11. The industry shall dispose of e-waste to the authorised recyclers only.
12. The industry shall submit the condition wise compliance report of the conditions stipulated in Schedule A, B & C of this Order on half yearly basis to Board Office, Hyderabad and concerned Regional Office.

Sd/-

MEMBER SECRETARY

To

M/s. Trimex Sands Pvt., Ltd.,
(Beach Sand Mining, Wet Plant & Mineral Separation Plants),
Vatsavalasa (V), Tonangi(V), Gara (M),
Srikakulam District – 532 001

//T.C.F.B.O//

10/03/15

* **JOINT CHIEF ENVIRONMENTAL ENGINEER**
UNIT HEAD - IV

भारत सरकार/Government of India
खान मंत्रालय/Ministry of Mines
भारतीय खान ब्यूरो/Indian Bureau of Mines
हैदराबाद क्षेत्रीय कार्यालय/Hyderabad Regional Office

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No. AP/SRK/MP/Garnet-Silliminate-7/Hyd

603, 6th Floor,
CGO Towers, Kavadiiguda,
Secunderabad – 500 080.

Date: 2 MAR 2017

To
✓ Sri T V Chowdary,
M/s. Trimex Sands Pvt. Ltd.,
Trimex Towers,
No.1, Subbaraya Avenue,
8P, Ramaswamy Rd., Alwarpet,
Chennai – 600018.

Sub: Approval of Modified Mining Plan in respect of Srikurmam Heavy Minerals Sands Mines of M/s. Trimex Sands Pvt. Ltd over an extent of 7.20 Sq.Km. in Vastsavalasa & Tonangi Villages, Gara Mandal, Srikakulam dist., A.P. submitted under Rule 17(3) of MCR, 2016.

Ref: 1. Your letter no. TSPL/IBM/MMP/2016/3 dated 03.01.2017.
2. This office letter of even no. dated 17.01.2017.
3. Your letter No. TSPL/IBM/MMP/2017/1 dated 31.01.2017.

Sir,

In exercise of the power conferred by the clause (b) of sub-section (2) of Section-5 of Mines and Minerals (Development and Regulation) Act, 1957 (as amended up to 27th March, 2015) and Powers delegated by the Controller General, Indian Bureau of Mines vide Order No.S.O.1857(E) dated 18th May,2016 and further as per Rule 3(2) of Atomic Mineral Concession Rules,2016 which states that "Mineral Concessions relating to atomic Minerals where the grade of atomic mineral contained in the ore is less than the threshold value will be governed by the provisions of the Minerals(other than atomic and Hydrocarbon Energy Minerals,2016 in force". I hereby approve the Modified Mining Plan .The approval is subject to the following conditions:

- i) The Modified Mining Plan is approved without prejudice to any other law applicable to the Mining lease area from time to time whether made by the Central Government, State Government or any other authority and without prejudice to any order or direction from any court of competent jurisdiction.
- ii) The proposals shown on the plates and/or given in the document is based on the lease map/sketch submitted by the lessee and is applicable from the date of approval.
- iii) It is also clarified that the approval of the aforesaid Modified Mining Plan does not in any way imply the approval of the Government in terms of any other provision of the Mines and Minerals (Development & Regulation) Act, 1957, or the Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016 and any other laws including Forest (Conservation) Act, 1980, Environment (Protection) Act, 1986 or the rules made there under, Mines Act, 1952 and Rule & Regulations made there under.
- iv) Indian Bureau of Mines has not undertaken verification of the applied Mining lease boundary on the ground and does not undertake any responsibility regarding correctness of the boundaries of the leasehold shown on the ground with reference to lease map & other plans furnished by the applicant.
- v) At any stage, if it is observed that the information furnished, data incorporated in the document are incorrect or misrepresent facts, the approval of the document shall be revoked with immediate effect.
- vi) The disposal of the radioactive waste generated if any, will be stacked/disposed as per the directives/instructions from the competent authority.

Yours faithfully,

(Pankaj Kulkarni)
Regional controller of Mines

Encl: One copy of approved Modified Mining Plan
containing Text-156, Annexure-68 & Plates-17

Copy for kind information to:

1. Sri Deepak Rathod, Trimex Towers, No. 1, Subbaraya Avenue, C.P. Ramswamy Road, Alwarpet, Chennai
2. The Director of Mines and Geology, Govt. of Andhra Pradesh, 4th and 5th Floors, Sri Anjaneya Towers, Ibrahimpatnam, Vijayawada, A.P. along with copy of Approved Mining Plan..
3. The Director of Mines Safety, Hyderabad Region, No.2, South Central Zone, DGMS, Room No.701, 7th Floor, CGO Towers, Praga Tools Premises, Kavadi Guda, Secunderabad- 500 080.

I

(Pankaj Kulshreshtha)
Regional controller of Mines

Andhra Pradesh Coastal Zone Management Authority Minutes of Meeting

S.No	Condition	Compliance
1	No mining shall be carried out in the inter-tidal zone and within 100 M from HTL towards landward side. No mining shall be carried out in sand dune areas.	No mining is carried out in the inter-tidal zone and within 100m from HTL towards landward side. Area beyond 100m from HTL area is demarcated with boundary pillars & barbed wire fencing. Enclosed as Annexure-8
2	Dressing or altering the sand dunes, hills, natural features including landscape changes shall not be carried out for beautification or recreational purposes. In case of mining of rare minerals, precautions shall be taken to prevent intrusion of sea water into the hinterland to avoid problem of submersion/ flooding.	All sand dunes are identified before undertaking mining activities, by the ENVID group, Andhra University, Visakhapatnam. In total, 325 dunes are identified of which 13 are available in the mining zone and the remaining are in no mining zone i.e. between HTL and 100 m line towards landward side from the HTL. All these dunes are being protected and maintained as per the approved plan. All precautions as per the recommendations of the Hydro Geological study by the Andhra university are being implemented to prevent intrusion of sea water into hinterland (Annexure-9)
3	The mining activities shall be regulated in such a way that there will be minimum disturbance to the fauna during spawning and breeding period i.e from November to March.	No mining activity is carried out near the 100 m line during the breeding period.
4	The depth of mining is subject to the approval of competent authorities such as AMD/IBM.	Complied by implementing the approved Mining Plan conditions.
5	Tailings and rejects should be filled back systematically after separating the heavy/rare minerals. Sand tailings shall be put back at the mined area on completion of extraction of rare minerals. As a follow up measure, afforestation with the suitable species shall be taken up on mined out areas to prevent erosion of shoreline.	Sand tailings and rejects are being filled back to mined out areas systematically after separating the heavy/rare minerals. Afforestation being carried out with different species on mined out areas to prevent erosion of shoreline.
6	Mining shall be carried out in phases only. Simultaneous opening of entire beach front is not permissible. There shall be uninterrupted access to the seafront. Minimum 20 m. width of approach roads shall be provided wherever necessary.	It is being complied.
7	Tapping of Ground water is expressly prohibited in CRZ area. A network of ground	No ground water is tapped from the CRZ area. Established 11 Nos. of

	water observation wells within and outside the lease area shall be established for regular monitoring of ground water quality and water levels in the surrounding areas. These analysis as per norms must be documented and sent regularly (every three months) to the Zonal Laboratory, Andhra Pradesh Pollution Control Board.	ground water observation wells within and outside the lease area and monitoring is being carried out by MoEF/PCB approved external laboratory and reports submitted to the regional office of the MoEF quarterly. Enclosed observation well's location map as Annexure - 6 and monitoring reports as Annexure -10 .
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8	Radiation survey shall be carried out as stipulated by the Atomic Minerals Division of Government of India to ascertain the effects of radio-active minerals.	Radiation survey is carried out at locations as per the directive of the Atomic Energy Regulations Board (AERB), DAE to ascertain the effects of radioactive minerals and reports submitted periodically (Annexure -12)
9	The Total Suspended Solids (TSS) in the discharge waste water shall be maintained within the permissible limit which is subject to the standards stipulated by the APPCB.	Being complied.
10	Baseline data of benthic fauna shall be furnished before the Commencement of the work on expansion of the existing project. The industry shall prepare such data and circulate among the members of the Andhra Pradesh State Coastal Zone Management Authority (APCZMA) for the purpose of record.	Approval obtained for Wildlife Conservation Plan from the Principal Chief Conservator of Forests (WL) & Chief Wildlife Warden, Hyderabad vide Rc.No:22899/2013/WL-3 Dt:11.11.2014 (Annexure -7).
11	The afforestation with suitable species shall be implemented to act as shelter belt / wind break to stabilize the filled up areas.	Being complied.
12	Mining shall be carried out by permitted methods without the use of any forms of blasting. Use of explosives for blasting is prohibited.	Complied, No blasting is carried out.
13	Extraction of Monozite is a prohibited activity as the same is not permitted by the Atomic Minerals Directorate of Department of Atomic Energy.	Complied.
14	The project proponent shall strive to obtain the performance report on similar plants under operation using seawater in South Africa or elsewhere.	Will be complied.
15	The Authority also felt that post project monitoring of shoreline by a specialized agency like NIO / ICMAM/ Andhra University shall be taken up to study the impact of mining of rare minerals on shoreline in conformity with the conditions stipulated in the environmental clearance by the Government of India to the industry.	Noted.

Registered Office :

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.

Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

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Laboratory Recognised by Ministry Environment, Forests and Climate Change, Gol, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/4/0917

dt 05.10.2017

Description of Test:

Ambient Air Quality Monitoring inside core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

As per details given below

Date of monitoring:

21.09.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO ₂ μ gms/M3	NO _x μ gms/M3
1	MSP- South East corner	35	78	7.9	16.6
2	MSP-North West corner	29	66	7.0	15.2
3	PCP-East gate	32	53	6.5	15.1
4	PCP-South West gate	43	81	7.7	16.3
5	Perlavanipet mines	24	60	6.4	13.9
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulate matter of less than 2.5 μ sizePM₁₀; Particulate matter of less than 10 μ size

MSP-Mineral Separation Plant

For TEAM Labs and Consultants



Labs and Consultants**Registered Office :**

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TEST REPORT

Test Report No .TLC /V/Env/ TSPL-N/01/0917

dt 05.10.2017

Description of Test: Ambient Air Quality Monitoring inside core zone

Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: New PCP Plant ,Tonangi

Date of monitoring: 20.09.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO2 μ gms/M3	NOx μ gms/M3
1	DG Area	47	95	7.8	15.4
2	Security gate	50	98	8.2	16.6
	APPCB STANDARD	60	100	80	80

PM_{2.5} : Particulatematter of less than 2.5 μ sizePM₁₀ : Particulatematter of less than 10 μ size

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TEST REPORT

Test Report No .TLC /V/Env/ TSPL/5/0917

dt 05.10.2017

Description of Test:

Ambient Air Quality Monitoring –Buffer zone

Name of the client:

Trimex Sands. PvtLtd.

Location of sampling:

surrounding villages as per details given

Date of monitoring:

20.09.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO2 μ gms/M3	NOx μ gms/M3
1	Srikurmam	28	59	7.2	14.7
2	Pedda vatsavalasa	25	65	7.5	15.1
3	Komaravani peta	19	41	6.0	12.0
4	Tonangi	32	70	7.1	15.8
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulate matter of less than 2.5 μ sizePM₁₀; Particulate matter of less than 10 μ size

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TEST REPORT

Test Report No .TLC /V/Env/ TSPL/4/0817

dt 06.09.2017

Description of Test:

Ambient Air Quality Monitoring inside core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

As per details given below

Date of monitoring:

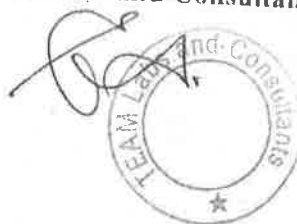
18..08.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO ₂ μ gms/M3	NO _x μ gms/M3
1	MSP- South East corner	22	58	6.9	14.2
2	MSP-North West corner	21	50	6.0	13.5
3	PCP-East gate	32	68	7.5	16.5
4	PCP-South West gate	27	62	6.9	15.5
5	Perlavanipet mines	25	63	6.2	14.5
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulatematter of less than 2.5 μ sizePM₁₀: Particulatematter of less than 10 μ size

MSP-Mineral Separation Plant

For TEAM Labs and Consultants



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TEST REPORT

Test Report No .TLC /V/Env/ TSPL-N/01/0817

dt 06.09.2017

Description of Test:

Ambient Air Quality Monitoring inside core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

New PCP Plant ,Tonangi

Date of monitoring:

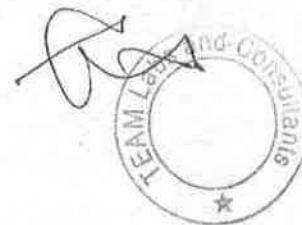
17.08.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO ₂ μ gms/M3	NO _x μ gms/M3
1	DG Area	12	50	6.0	13.2
2	Security gate	13	45	6.0	12.8
	APPCB STANDARD	60	100	80	80

PM_{2.5} : Particulate matter of less than 2.5 μ size

PM₁₀ : Particulate matter of less than 10 μ size

For TEAM Labs and Consultants



Labs and Consultants

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Test Report No .TLC /V/Env/ TSPL/5/0817

dt 06.09.2017

Description of Test:

Ambient Air Quality Monitoring -Buffer zone

Name of the client:

Trimex Sands. PvtLtd.

Location of sampling:

surrounding villages as per details given

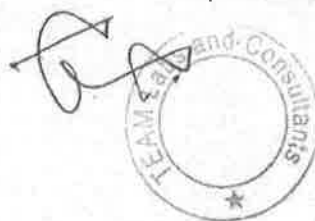
Date of monitoring:

17.08.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO2 μ gms/M3	NOx μ gms/M3
1	Srikurmam	15	45		
2	Pedda vatsavalasa	16	40	6.0	13.8
3	Komaravani peta	12	37	6.0	12.3
4	Tonangi	20	50	6.7	15.2
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulatematter of less than 2.5 μ sizePM₁₀ :Particulatematter of less than 10 μ size

For TEAM Labs and Consultants



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303

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/4/0717

dt 05.08.2017

Description of Test:

Ambient Air Quality Monitoring inside core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

As per details given below

Date of monitoring:

18.07.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO2 μ gms/M3	NOx μ gms/M3
1	MSP- South East corner	25	60	7.2	15.8
2	MSP-North West corner	30	66	7.5	16.1
3	PCP-East gate	35	74	7.9	17.2
4	PCP-South West gate	27	60	6.8	15.5
5	Perlavanipet mines	22	62	7.0	15.7
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulate matter of less than 2.5 μ sizePM₁₀: Particulate matter of less than 10 μ size

MSP-Mineral Separation Plant

For TEAM Labs and Consultants



Labs and Consultants

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TEST REPORT

Test Report No .TLC /V/Env/ TSPL-N/01/0717

dt 05.08.2017

Description of Test:

Ambient Air Quality Monitoring inside core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

New PCP Plant ,Tonangi

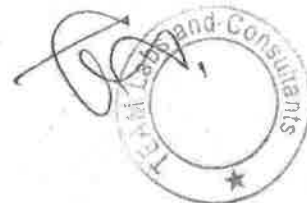
Date of monitoring:

17.07.2017

No	Location	particulate matter PM _{2.5} µ gms/M3	particulate matter PM ₁₀ µ gms/M3	SO2 µ gms/M3	NOx µ gms/M3
1	DG Area	13	48	6.0	13.7
2	Security gate	14	52	6.6	15.7
	APPCB STANDARD	60	100	80	80

PM_{2.5} : Particulate matter of less than 2.5 µ sizePM₁₀; Particulate matter of less than 10 µ size

For TEAM Labs and Consultants



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TEST REPORT

Test Report No .TLC /V/Env/ TSPL/5/0717

dt 05.08.2017

Description of Test:

Ambient Air Quality Monitoring -Buffer zone

Name of the client:

Trimex Sands. PvtLtd.

Location of sampling:

surrounding villages as per details given

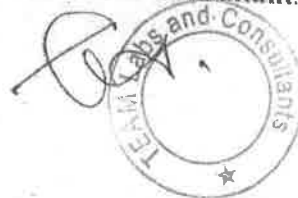
Date of monitoring:

17.07.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO2 μ gms/M3	NOx μ gms/M3
1	Srikurmam	22	62	7.6	17.1
2	Pedda vatsavalasa	18	42	6.5	12.8
3	Komaravani peta	15	40	6.0	11.5
4	Tonangi	24	58	7.0	16.8
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulate matter of less than 2.5 μ sizePM₁₀ :Particulate matter of less than 10 μ size

For TEAM Labs and Consultants



Labs and Consultants**2819****Registered Office :**

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Laboratory Recognised by Ministry Environment, Forests and Climate Change, Govt, New Delhi

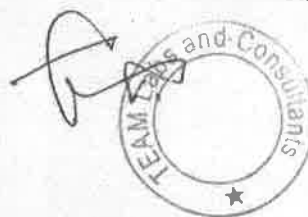
TEST REPORT**Test Report No .TLC /V/Env/ TSPL/4/0617****dt 05.07.2017**

Description of Test: Ambient Air Quality Monitoring inside core zone
Name of the client: Trimex Sands Pvt. Ltd.
Location of sampling: As per details given below
Date of monitoring: 29.06.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO ₂ μ gms/M3	NO _x μ gms/M3
1	MSP- South East corner	26	62	7.8	16.2
2	MSP-North West corner	25	53	6.2	14.4
3	PCP-East gate	30	64	7.0	16.6
4	PCP-South West gate	25	58	6.6	15.0
5	Perlavanipet mines	28	70	7.0	15.5
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulate matter of less than 2.5 μ sizePM₁₀; Particulate matter of less than 10 μ size

MSP-Mineral Separation Plant

For TEAM Labs and Consultants

Labs and Consultants**2820****Registered Office :**

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Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL-N/01/0617

dt 05.07,2017

Description of Test:

Ambient Air Quality Monitoring inside core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

New PCP Plant ,Tonangi

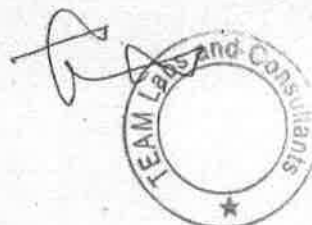
Date of monitoring:

28.06.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO2 μ gms/M3	NOx μ gms/M3
1	DG Area	14	45	6.2	14.3
2	Security gate	12	48	6.4	15.2
	APPCB STANDARD	60	100	80	80

PM_{2.5} : Particulate matter of less than 2.5 μ sizePM₁₀ : Particulate matter of less than 10 μ size

For TEAM Labs and Consultants



Labs and Consultants**2822****Registered Office :**

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TEST REPORT

Test Report No .TLC /V/Env/ TSPL/5/0617

dt 05.07.2017

Description of Test:

Ambient Air Quality Monitoring -Buffer zone

Name of the client:

Trimex Sands. PvtLtd.

Location of sampling:

surrounding villages as per details given

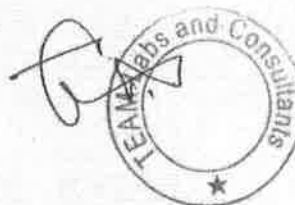
Date of monitoring:

28.06.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO2 μ gms/M3	NOx μ gms/M3
1	Srikurmam	19	48	7.1	16.6
2	Pedda vatsavalasa	20	45	7.0	14.6
3	Komaravani peta	14	38	6.0	12.5
4	Tonangi	25	55	7.2	16.2
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulatematter of less than 2.5 μ sizePM₁₀; Particulatematter of less than 10 μ size

For TEAM Labs and Consultants



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ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization

Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/4/0517

dt 05.06.2017

Description of Test:

Ambient Air Quality Monitoring inside core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

As per details given below

Date of monitoring:

16.05.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO2 μ gms/M3	NOx μ gms/M3
1	MSP- South East corner	27	65	7.5	15.6
2	MSP-North West corner	25	55	6.5	14.2
3	PCP-East gate	47	94	8.0	17.9
4	PCP-South West gate	35	75	7.0	15.9
5	Perlavani pet mines	30	68	7.5	15.2
	APPCB STANDARD	60	100	80	80

PM_{2.5}:Particulate matter of less than 2.5 μ sizePM₁₀: Particulate matter of less than 10 μ size

MSP-Mineral Separation Plant

For TEAM Labs and Consultants



Registered Office :

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.

Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, Govt, New Delhi**TEST REPORT**

Test Report No .TLC /V/Env/ TSPL-N/01/0517

dt 05.06.2017

Description of Test: Ambient Air Quality Monitoring inside core zone

Name of the client: Trimex Sands Pvt. Ltd.

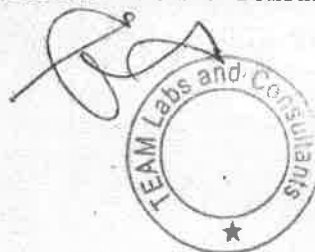
Location of sampling: New PCP Plant ,Tonangi

Date of monitoring: 15.05.2017

No	Location	particulate matter PM _{2.5} µ gms/M3	particulate matter PM ₁₀ µ gms/M3	SO2 µ gms/M3	NOx µ gms/M3
1	DG Area	25	66	7.2	15.0
2	Security gate	27	60	7.0	15.5
	APPCB STANDARD	60	100	80	80

PM_{2.5} : Particulatematter of less than 2.5 µ sizePM₁₀: Particulatematter of less than 10 µ size

For TEAM Labs and Consultants



Registered Office :

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.

Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi**TEST REPORT**

Test Report No .TLC /V/Env/ TSPL/5/0517

dt 05.06.2017

Description of Test: Ambient Air Quality Monitoring -Buffer zone

Name of the client: Trimex Sands. PvtLtd.

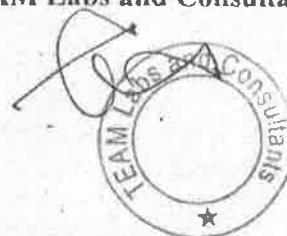
Location of sampling: surrounding villages as per details given

Date of monitoring: 15.05.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO2 μ gms/M3	NOx μ gms/M3
1	Srikurmam	31	77	8.4	19.2
2	Pedda vatsavalasa	24	60	7.0	15.0
3	Komaravani peta	18	50	6.0	12.8
4	Tonangi	27	62	6.8	15.5
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulatematter of less than 2.5 μ sizePM₁₀; Particulatematter of less than 10 μ size

For TEAM Labs and Consultants



Labs and Consultants**Registered Office :**

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.

Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

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Laboratory Recognised by Ministry Environment, Forests and Climate Change, Govt, New Delhi

2377

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/4/0417

dt 06.05.2017

Description of Test: Ambient Air Quality Monitoring inside core zone

Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: As per details given below

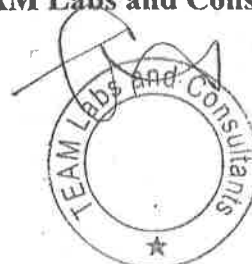
Date of monitoring: 12.04.2017

No	Location	particulate matter PM _{2.5} µ gms/M3	particulate matter PM ₁₀ µ gms/M3	SO ₂ µ gms/M3	NO _x µ gms/M3
1	MSP- South East corner	21	50	7.2	14.8
2	MSP-North West corner	20	52	7.0	15.2
3	PCP-East gate	45	92	8.2	16.5
4	PCP-South West gate	30	65	7.5	16.3
5	Perlayanipet mines	27	60	7.2	15.9
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulate matter of less than 2.5 µ sizePM₁₀: Particulate matter of less than 10 µ size

MSP-Mineral Separation Plant

For TEAM Labs and Consultants



Labs and Consultants**Registered Office :****2373**

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.

Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi**TEST REPORT**

Test Report No .TLC /V/Env/ TSPL-N/01/0417

dt 06.05.2017

Description of Test: Ambient Air Quality Monitoring inside core zone

Name of the client: Trimex Sands Pvt. Ltd.

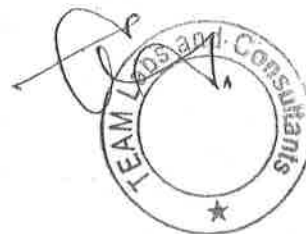
Location of sampling: New PCP Plant ,Tonangi

Date of monitoring: 11.04.2017

No	Location	particulate matter PM _{2.5} μ gms/M3	particulate matter PM ₁₀ μ gms/M3	SO2 μ gms/M3	NOx μ gms/M3
1	DG Area	22	54	7.0	14.4
2	Security gate	25	58	7.7	16.1
	APPCB STANDARD	60	100	80	80

PM_{2.5} : Particulate matter of less than 2.5 μ sizePM₁₀ : Particulate matter of less than 10 μ size

For TEAM Labs and Consultants



Labs and Consultants

2380

Registered Office :

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Laboratory Recognised by Ministry Environment, Forests and Climate Change, Govt, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/5/0417

dt 06.05.2017

Description of Test: Ambient Air Quality Monitoring –Buffer zone

Name of the client: Trimex Sands. PvtLtd.

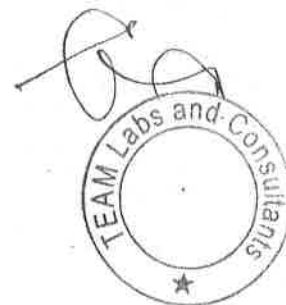
Location of sampling: surrounding villages as per details given

Date of monitoring: 11.04.2017

No	Location	particulate matter PM _{2.5} µ gms/M3	particulate matter PM ₁₀ µ gms/M3	SO2 µ gms/M3	NOx µ gms/M3
1	Srikurmam	27	72	8.2	17.7
2	Pedda vatsavalasa	20	57	7.2	14.9
3	Komaravani peta	15	47	6.8	13.5
4	Tonangi	25	55	6.6	14.2
	APPCB STANDARD	60	100	80	80

PM_{2.5} :Particulate matter of less than 2.5 µ sizePM₁₀; Particulate matter of less than 10 µ size

For TEAM Labs and Consultants





Annexure-17

O/c.

TSPL/ENV/MOEF/2017-18/117

Srikakulam,
23-10-2017.

To
The Regional Office (South Eastern Zone)
Ministry of Environment, Forests and Climate Change
1st & 2nd floor, HEPC building, No.34
Cathedral Garden Road, Nungambakkam
Chennai - 6000347

Dear Sir,

Sub: Observation wells water quality data report – Submission - Reg.

Ref: Environmental Clearance vide No.J-11015/175/2011-IA.II (M)
dated 17-04-2015 & CRZ Clearance vide F.No.11-67/2013-IA-III dated 28-
04-2015.

As per the reference cited above, please find herewith enclosed quarterly report of
observation wells & Piezometer monitoring for the period of Jul to Sep, 2017.

Thanking You,

Yours faithfully,

Sr. Vice President (Mines)

CC:

Regional Director, CGWB, Hyderabad-500068
Central Pollution Control Board, Bengalure
AP Pollution Control Board, Hyderabad
AP Pollution Control Board, Vizianagaram

Trimex Sands Pvt Ltd: Vatchavalasa (V), Gara Mandal, Srikakulam District - 532404, Andhra Pradesh, India.
Tel: +91 8942 283755, Fax: +91 8942 283758, email: info@trimexsands.com

Hyderabad Office: 2nd Floor, Sri Durga Towers, Plot No. 201, Road No. 10, Banjara Hills, Hyderabad - 500 034, Andhra Pradesh, India.
Tel: +91 40 2338 4380 / 3371 3600 Fax: +91 40 2338 4068

Reg. Office: Trimex Towers, No.1 Subbaraya Avenue, C.P. Ramaswamy Road, Alwarpet, Chennai - 600 018, Tamilnadu, India.
Tel: +91 44 2498 8822 / 8813 Fax: +91 44 2498 6047 web: www.trimexsands.com

CIN: U14299TN2004PTC071437



TSPL/ENV/MOEF/2017-18/1095

Srikakulam,
25-07-2017.

To
The Regional Office (South Eastern Zone)
Ministry of Environment, Forests and Climate Change
1st & 2nd floor, HEPC building, No.34
Cathedral Garden Road, Nungambakkam
Chennai - 600034

Dear Sir,

Sub: Observation wells water quality data report – Submission - Reg.

Ref: Environmental Clearance vide No.J-11015/175/2011-IA.II (M)
dated 17-04-2015 & CRZ Clearance vide F.No.11-67/2013-IA-III dated 28-04-2015.

As per the reference cited above, please find herewith enclosed quarterly report of observation wells & Piezometer monitoring for the period of Apr to Jun, 2017.

Thanking You,

Yours faithfully,

Vice President (Mines)

CC:

Regional Director, CGWB, Hyderabad-500068
Central Pollution Control Board, Bengalure
AP Pollution Control Board, Hyderabad
AP Pollution Control Board, Vizianagaram

Trimex Sands Pvt Ltd: Vatchavalasa (V), Gara Mandal, Srikakulam District - 532 404, Andhra Pradesh, India.
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Tel: +91 44 2498 8822 / 8813 Fax: +91 44 2498 6047 web: www.trimexsands.com

CIN: U14299TN2004PTC071437

TEAM

Labs and Consultants

ORIGINAL

Form-No. TCL/L/GF/RF-138

Registered Office :

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.
Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, Gol, New Delhi

TEST REPORT

Test Report No. TLC/V/Env/TSPL/9A/0917

Description of Test:

Phisico-chemical Analysis of Water

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

Pond at Vatchavalasa

Date of Sample Collected :

21.09.2017

No	parameter	Pond at Vatchavalasa
1	pH	8.15
2	Colour Hazen units	5
3	Odour	un objectionable
4	Total Dissolved solids	390 mgpl
5	Total Suspended Solids	5
6	Turbidity	2.8NTU
7	Total Hardness as CaCo3	110mgpl
8	Calcium as CaCo3	70mgpl
9	Magnesium as CaCo3	40mgpl
10	Chlorides Cl-	140mgpl
11	Flouride	0.5 mgpl
12	Sulphates	37mgpl
13	Nitrates	1.5mgpl
14	Phosphates	BDL
15	Iron	0.03mgpl
16	Lead	BDL
	Water table from groundlevel inmtrs	-

For TEAM Labs and Consultants



TEAM**Labs and Consultants****ORIGINAL**

Form No: TCL/UGF/F-138

2833**Registered Office :**

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.
Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, Govt, New Delhi

TEST REPORT

Test Report No. TLC/V/Env/TSPL/9A/0617

dt 05.07.2017

Description of Test:

Phisico-chemical Analysis of Water

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

Vatchavalasa Pond

Date of Sample Collected :

29.06.2017

No	parameter	Pond at Vatchavalasa
1	pH	7.85
2	Colour Hazen units	5
3	Odour	un objectionable
4	Total Dissolved solids	250
5	Total Suspended Solids	5
6	Turbidity	1.4NTU
7	Total Hardness as CaCo3	90mgpl
8	Calcium as CaCo3	60mgpl
9	Magnesium as CaCo3	30mgpl
10	Chlorides Cl-	195mgpl
11	Flouride	0.5 mgpl
12	Sulphates	30mgpl
13	Nitrates	1.0mgpl
14	Phosphates	BDL
15	Iron	0.03mgpl
16	Lead	BDL
	Water table from groundlevel inmtrs	-

For TEAM Labs and Consultants





o/c.

TSPL/MIN/MoEF/ENV/17-18/1084

Srikakulam,
30-06-2017.

To
The Regional Office (South Eastern Zone)
Ministry of Environment, Forests and Climate Change
1st and 2nd floor, HEPC Building, No.34,
Cathedral Garden Road, Nungambakkam,
Chennai – 600034

Dear Sir,

Sub: Srikurmam Mineral Sand Mine of Trimex Sands Pvt. Ltd., Village Vatsavalasa,
Gara Mandal, Srikakulam District, Andhra Pradesh., Submission of half yearly
Environmental Clearance compliance report for the period of Oct'2016 –
Mar'2017 – Reg.

Ref: Environmental Clearance vide No.J-11015/175/2011-IA.II (M) dated
17-04-2015.

With reference to the subject Environmental Clearance granted vide reference above, we are
submitting the half yearly EC compliance report for the period of Oct'2016 – Mar'2017.

Thanking you

Yours truly

Vice President (Mines)

CC to : 1. APPCB, RO, VZM
2. CPCB, ZO, Bangalore

Trimex Sands Pvt Ltd: Vatsavalasa (V), Gara Mandal, Srikakulam District - 532 404, Andhra Pradesh, India.
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Tel: +91 44 2498 8822 / 8813 Fax: +91 44 2498 6047 web: www.trimexsands.com

CIN : U14299TN2004PTC071437



Compliance report on E.C Conditions

Environmental Clearance Vide No.J-11015/175/2011-IA.II (M) dated 17-04-2015

A. Specific conditions.

S.No	Conditions	Compliance
1	The 325 dunes recorded in the TSPL area of which, 13 dunes exist beyond 100m from the high tide, shall be protected and maintained. All effort should be made to ensure that existing natural vegetation of these dunes are fully protected.	Dunes which are existing beyond and up to 100mts from HTL are protected. Also efforts are taken to protect the vegetation on these dunes.
2	Rs. 1.80 crore proposed for Wildlife Conservation plan should be deposited within one month of issue of EC letter for implementation of Wildlife Conservation plan by the Department.	As per the approved wildlife conservation plan the amount required for conservation is of Rs.1.8 crore for the period of 10 years. We have requested the Ministry of MoEF to make the payment every year and it is pending. However, we have deposited for an amount of Rs. 15.10 Lakhs for FY 2015-16 on 14.03.2016 (Annexure-1A) and Rs.15.10 Lakhs for FY 2016-17 on 17.03.2017 (Annexure-1B) to the Principal Chief Conservator of Forests & Chief Wildlife Warden, Hyderabad through the Divisional Forest Officer, Srikakulam. Further, as advised by DFO vide Re No. 1316/2015-A1, dated 16.06.2017, we would be comply on or before 15th July 2017 vide our letter dated 22.06.2017 (Annexure-1C).
3	The Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the standing Committee of National Board of Wildlife, as may be applicable to this project.	Not Applicable.
4	The Environmental clearance is subject to obtaining clearance under the Coastal Regulation Zone, Notification, 2011 to this project.	CRZ Clearance obtained Vide F.No.11-67/2013-IA-III dated 28-04-2015.
5	Necessary AERB clearance shall be obtained under the Atomic Energy (Radiation Protection) Rules, 2004 for operation of BSM (beach Sand Minerals) facility.	AERB License has been obtained and copy of same submitted to RO vide lr. no. TSPL/MIN/MoEF/ENV/15-16/921 Dated 28-11-2015
6	The mining activity will commence only after taking	No ground water drawal is required

	necessary approval of water drawl from the concerned Authority of State Government.	during mining activity. However, approval is taken from the State Govt for drawal of water from the Vamsadara river (Annexure - 2).
7	The mined area should be replenished immediately.	The tailings generated after concentrating and separating the minerals at the plants is being used for concurrent backfilling of the mined out lands (Annexure 3).
8	The mineral separation plant/pre-concentration plant should be located outside coastal Regulation Zone area.	Mineral separation plant and pre-concentration plants are located outside CRZ area. Map enclosed as Annexure -4
9	Implementation of Wildlife Conservation plan for schedule - I species. The conservation plan should be species specific, should have allocation of budget, time frame and agencies to be responsible for the implementation for each of the target species. Conservation plan shall be approved by the State Government.	Wildlife Conservation Plan for schedule - I species is approved by the Principal Chief Conservator of Forests (WL) & Chief Wildlife Warden, Hyderabad. Submitted vide Ir. no. TSPL/MIN/MoEF/ENV/15-16/921 Dated: 28-11-2015
10	No mining shall be carried out in the inter-tidal zone and within 100m from HTL towards landward side.	Mining is carried out beyond 100m from HTL towards landward side and beyond 100m from HTL area is demarcated with boundary pillars with barbed wire fencing to ensure that no mining is carried out. Enclosed as Annexure-5 .
11	Identification of sand dunes shall be done prior to undertaking mining activities and their conservation shall be as per MoEF guidelines from time to time. No flattening of sand dunes shall be carried out. Dressing or altering the sand dunes, hills, natural features including landscape changes shall not be carried out for beautification/recreational purposes. Precautions shall be taken to prevent intrusion of sea water into hinterland to avoid problem of submersion/flooding.	All sand dunes are identified before undertaking mining activities, by the ENVID group, Andhra University, Visakhapatnam. All these dunes are being protected and maintained as per MoEF guidelines and approved plan. No flattening, dressing or altering and landscape changes of sand dunes are done. All precautions as per the recommendations of the Hydro Geological study by the Andhra university are being implemented to prevent intrusion of sea water into hinterland.
12	Fencing of entire lease area barrier of 100 meters towards sea to prevent olive turtle nesting ground.	Towards landward side 100m from HTL line is demarcated with pillars along with barbed wire fencing to ensure that no mining is carried out between 100m HTL line and HTL. (Annexure -5)



13	Tailings and rejects shall be filled back systematically after separating the heavy/rare minerals. Sand tailing shall be put back at the mined area on completion of extraction of rare minerals. Afforestation shall be taken up with suitable species on mined out areas to prevent erosion of shoreline. Under no circumstances, the tailings will be dumped in agricultural lands, wet lands, paddy fields, canals and the backfilling will be carried out only in the inland mined out areas.	Sand tailings and rejects are being filled back to the mined out areas systematically after separating the heavy minerals. Afforestation is being carried out with different species on mined out areas to prevent erosion of shoreline. No waste is dumped outside the mining lease area in agricultural lands, wet lands, paddy fields, canals and the backfilling is carried out only in the inland mined out areas.
14	The mining activities shall be regulated in such a way that there will be minimum disturbance to the fauna during spawning and brooding period i.e. from November to March.	It is being complied by avoiding working near the 100m line during the season and also by opening up minimum area at any point of time.
15	Mining shall be carried out in phases only. Simultaneous opening of entire beach front is not permissible, There shall be uninterrupted access to the seafront, Minimum 20m width of approach roads shall be provided where necessary.	Mining and backfilling operations are done concurrently and in phases. No mining is done near the beach front. Uninterrupted access is provided to the beach with approach road.
16	Tapping of ground water is expressly prohibited in CRZ area. A network of ground water observation wells within and outside the lease area shall be established for regular monitoring of ground water quality and water levels in the surrounding area. These analysis as per norms much be documented and sent regularly (every three months) to the Regional Office MoEF.	No ground water is tapped from the CRZ area. Established 10 Nos. of ground water observation wells within and outside the lease area and monitoring is being carried out and reports submitted to the regional office of the MoEF quarterly. Enclosed observation well's location map As Annexure - 4 and monitoring reports as Annexure - 6.
17	The fresh water gradient towards the sea will be maintained by close monitoring of water table. Piezometer wells to be constructed and monitored.	7 Nos. of Piezometer wells are provided and monitoring is being carried out. Enclosed monitoring data as Annexure-7.
18	Mining shall be carried out by permitted methods without the use of any forms of blasting. Use of explosives for blasting is prohibited. The mining should be stated near sea side and mining should be progressed parallel to sea coast so that inland water table is not disturbed.	No blasting is carried out. The mining was started near sea side and mining is progressed parallel to sea coast so that inland water table is not disturbed.
19	Radiation survey shall be carried out as stipulated by the Atomic Minerals Directorate for Exploration and research, Department of Atomic Energy, Government of India to ascertain the effects of radioactive minerals.	Radiation survey is carried out as per the directive of the Atomic Energy Regulations Board (AERB), DAE to ascertain the effects of radioactive minerals and reports submitted periodically (Annexure - 8)
20	Occupational health and safety measures, especially concerning radiation hypertension, diabetes etc,	Occupational health check up and safety measures, especially concerning radiation



	should have health check-up once in six months.	hypertension, diabetes etc. is carried out once in six months and records are maintained.
21	The project proponent shall obtain Consent to Operate from the State Pollution Control Board, Andhra Pradesh and effectively implement all the conditions stipulated therein.	We have obtained Consent to Operate from the State Pollution Control Board, Andhra Pradesh on 30.10.2015 and it is valid upto May 2018. The copy of same has been submitted vide Ir.no. TSPL/MIN/MoEF/ENV/15-16/921 Dated: 28-11-2015
22	Implementation of conditions laid down in the Mining Plan along with progressive Mine Closure Plan which has been approved by Indian Bureau of Mines, Ministry of Mines vide Letter No. AP/SRK/MP/Garnet-2/Hyd dated 26.09.2003 and 18.06.2009.	Mining Plan conditions are being implemented along with progressive Mine Closure Plan which has been approved by Indian Bureau of Mines vide letter no. AP/SRK/MP/Garnet-2/Hyd. dated 26.09.2003 & 18.06.2009 and Modified Mining Plan approval vide letter no. AP/SRK/MP/Garnet-Sillimanite-7/Hyd. dated 02.03.2017 (Annexure-9).
23	Implementation of conditions laid down in the Mining Plan which has been approved by Atomic Minerals directorate for Exploration and Research, Department of Atomic Energy vide Letter No. AMD/MPA/3M/TRIMEX/03, dated December 08, 2003 and Mining scheme approval vide no. AMD/MPA/3M/TSPL/720ha/2009 dated 17.08.2009.	Mining Plan conditions are being implemented as approved by Atomic Minerals Directorate for Exploration and Research, Department of Atomic Energy vide letter no. AMD/MPA/3M/TRIME/03, dated 08.12.2003 and Mining Scheme approval vide no. AMD/MPA/3M/TSPL/720ha/2009 dated 17.08.2009.
24	Implementation of the Conditions, if any, as laid down by Andhra Pradesh State Coastal Zone Management Authority.	All conditions are implemented as detailed, Proof submitted vide letter No. TSPL/MIN/MoEF/ENV/16-17/1039 dated 29-11-2016
25	Effective safeguard measures such as conditioning of material with water, regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and transfer points. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	In dry plant, ambient dust is arrested from the generating points by dust extraction system consisting of de-dusting mechanism, cyclone and bag filters etc. Water sprinklers are installed at MSP rejects discharge point and water tankers are deployed for haul road wetting. Ambient Air Quality monitoring is being carried out as per norms prescribed by the PCB. Ambient air quality monitoring reports are enclosed as Annexure - 10
26	Regular monitoring of ground water level and quality	Ground water monitoring is being carried



	shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(At least four times in a year-pre-monsoon(April-May),monsoon (August), post-monsoon(November)and winter(January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment, Forests & Climate Change and its Regional Office Chennai, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity necessary corrective measures shall be carried out.	in the observation wells situated within and outside the lease area. In addition, 7 Nos. of piezometers are installed in the mining lease area and water table, salinity, pH, TDS etc are monitored. It is observed that there is no depletion in ground water table or negative change in the quality. Details are submitted to all authorities as directed. Enclosed Annexure - 11
27	The project proponent shall ensure that no natural watercourse and /or water resources shall be obstructed due to any operations.	No obstructions are made to any natural water course or water resources.
28	Regular monitoring of water quality upstream and downstream of adjoin water bodies shall be carried out an record of monitoring data should be maintained and submitted to Minister of Environment,. Forests & Climate Change its Regional office, Chennai, Central Ground water Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.	No water body (except sea) is available within or adjacent to the mining lease area. However, water monitoring is done in a pond situated near the mining lease area. (Annexure -12)
29	As part of ambient air quality monitoring during operational phase of the project, the air samples shall also be analyzed for their mineralogical composition and records maintained.	Ambient Air Quality Monitoring is being carried out. Enclosed reports as Annexure - 10.
30	Compliance status shall be submitted to the Minister of Environment, Forests & Climate Change its Regional office, located at Chennai on six monthly basis.	Compliance status is being submitting on six monthly basis to RO, Chennai. Last report was submitted vide letter No. TSPL/MIN/MoEF/ENV/16-17/1039 dated 29-11-2016
31	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	In dry plant, ambient dust is arrested from the generating points by dust extraction system consisting of de-dusting mechanism, cyclone and bag filters etc. Water sprinklers are installed at MSP rejects discharge point and water tankers are deployed for haul road wetting. Ambient Air Quality monitoring is being carried out as per norms prescribed by the CPCB. Annexure - 10.
32	Vehicular Emissions shall be kept under control and	Vehicular Emissions are kept under



	regularly monitored. Vehicles used for transportation of ores and other shall have valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. The vehicles shall be covered with a tarpaulin and shall not be over loaded.	control and regularly monitored. Vehicles used for transportation of ores are having valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. The ore carrying vehicles are covered with tarpaulin and not over loaded as informed.
33	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment and Forests and its Regional Office, Chennai.	Will be complied.
34	Implementation of Action plan on issues rose during Public Hearing. As committed by the project proponent during the public hearing shall be implemented and the report shall be submitted to the Regional Office of the Ministry every year.	All the commitments made during the public hearing are being implemented and Proof submitted vide letter No. TSPL/MIN/MoEF/ENV/16-17/1039 dated 29-11-2016. CSR expenditure for the year 2016-17 enclosed as Annexure - 13.
35	During initial mining stages, a green belt of 7.5m barrier all around the mine lease boundary shall be made. Subsequently to develop 50m barrier zone with 5-tier plantation inside mine lease in a progressive way near the active mining sites. Adequate plantation shall be raised in the ML area, haul roads, vacant area etc. Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. The density of the trees shall not be less than 2500 plants per ha. The company shall involve local people with the help of self-help group for plantation programme. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the Regional Office of the Ministry every year.	A green belt of 7.5m barrier along the ML boundary has been taken up wherever mining has been completed and also it is continuing. We have agreed to take up 5-tier plantation from this year onwards since it is stipulated in 2015 EC. Afforestation is being carried out in mined out and backfilled lands with in-house nursery saplings and saplings sourced from the forest dept. Greenbelt development is under progress around mine lease boundary and vacant areas. Density of plantation is more than 2500 plants per ha carried out in consultation with the local DFO. Details of plantation carried out, extent of land covered and green belt developed during the year 2016-17 is attached as Annexure - 14.
36	Adequate air monitoring stations shall be installed in areas of human habitations near the mine and the results of ambient air quality shall be maintained and regularly submitted to the Regional Office of the Ministry. The monitored data for criteria pollutants shall be regularly uploaded on the company's website and also displayed at project site.	Out of 10 AAQ monitoring stations 4 number of stations are located near the habitations and the AAQ monitoring is carried out regularly through approved external laboratory. The levels are within the limit. Enclosed reports as per Annexure - 10.
37	The waste water from the mine shall be treated to conform to the prescribe standards before discharging in to the natural stream. The discharged water shall be	No water from the mine or plant is discharged into any natural stream. Water used for mineral concentration is pumped



	Ministry of Environment & Forests, Central Pollution Control Board and the State Pollution Control Board.	back filling and water is recovered back to the plant through water treatment plant/thickeners for recycling for process.
38	A final mine closure plan, along with other details shall be submitted to the Ministry of Environment & Forests, 5 years in advance of final mine closure for approval.	Will be complied.

B. General Conditions:

S. No	Condition	Compliance
1	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	There is no change in the mining technology and scope of working.
2	No change in the calendar plan including excavation, quantum of beach sand mineral i.e. Ilmenite, Rutile, Zircon, Monazite and Garnet and waste should be made.	There is no change in the calendar plan including excavation, quantum of beach sand mineral i.e. Ilmenite, Rutile, Zircon, Sillimanite and Garnet and Waste. Details of production of RoM, minerals and waste during the last 6 months is enclosed as per Annexure- 15
3	At least four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 micron i.e. PM ₁₀) and NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board/Central Pollution Control Board once in six months.	The AAQ is monitored in the core as well as in the buffer zone at 10 locations through external approved laboratory for PM ₁₀ and PM _{2.5} and NO _x . The parameters are within the limit. The location of the AAQMS were decided in consultation with State Pollution Control Board based on the meteorological data, topographical features and environmentally and ecologically sensitive targets. The frequency of monitoring is carried out as directed by the SPCB in their consent. Enclosed AAQM reports as per Annexure - 10
4	Measures should be taken for control of noise levels below 85 db in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs.	Noise monitoring being carried out through external agency and the levels are within the limit. Enclosed reports as per Annexure - 16 Workers engaged in HEMM operation are provided with ear muffs.
5	There will be zero waste water discharge from the plant.	The water used for mineral processing activities is pumped into the mining pit along with the tailings in the form of slurry and no waste water is discharged outside. For the toilets and canteen waste water septic tanks and soak pits are



		provided.
6	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.	Personnel working in dusty areas are provided with personnel protective equipment. Details of the PPE issued during the period are enclosed as Annexure – 17
7	Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Occupational health surveillance programme of the workers is being carried out regularly as per the Mines Act and records are maintained.
8	A separate environmental management cell with suitable qualified personal should be should be set up under the control o a Senior Executive, who will report directly to the Head of the Organization.	We have set up a separate environment management cell with qualified person under the control of Senior Executive. Monitoring of environmental parameters are carried out through external approved laboratories.
9	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Chennai.	We have allocated an adequate amount for environment management activities and it is kept in a separate account and also not diverted for any other purpose. Year wise expenditure is reported to RO, Chennai. Expenditure during the period for financial year 2016-17 given as Annexure - 18
10	The project authorities should inform to the Regional Office located at Chennai regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	We have informed to RO, Chennai regarding EC/CRZ approvals vide our letter dated 05.05.2015. Also intimated the RO about final approval for the project i.e. CFO dated 30.10.2015 for the project vide our letter dated 28.11.2015.
11	The Regional Office of this Ministry located at Chennai shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation the officers(s) of the Regional Office furnishing the requisite data/information/monitoring reports.	Being complied.
12	The project proponent shall submit six monthly reports on the status compliance of the stipulated environmental clearance conditions including results of monitored data ((both in hard copies as well as by e-mail) to the Ministry of Environment, Forests & Climate Change , its Regional Office Chennai, the respective Zonal Office of Central Pollution Control	We are submitting six monthly compliance reports both hard copy and soft copy to the Regional Office and the reports are uploaded on the website periodically.



	Board and State Pollution Control Board. The Proponent shall upload the status of compliance of the environmental clearance conditions including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the Ministry of Environment, Forest & Climate Change Chennai, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.	
13	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Prasad/Municipal Corporation, urban Local Body and the Local NGO, If any from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	A copy of EC was sent to local panchayat vide our letter dated 05.05.2015. The clearance letter also was put on the website of the company.
14	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collectors's office/Tehsildar's Office for 30days.	Complied. Proof submitted vide letter No. TSPL/MIN/MoEF/ENV/15-16/921 dated 28-11-2015
15	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry of Environment, Forests & Climate Change, Chennai by e-mail.	The Form-V is submitted to RO regularly and uploaded on the company website. Copy of same for the period 2015-16 vide letter No. TSPL/ENV/PCB/ES/2015-16/1007 dated 13-08-2016. Annexure - 19
16	The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forests & Climate Change at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located at Chennai.	We had given an advertisement in two local newspaper and submitted copies of the same to RO, Chennai vide our letter dated 05.05.2015.

**COMPLIANCE TO THE PUBLIC HEARING OF SRIKURMAM MINERAL SANDS
MINE OF TRIMEX SANDS PVT. LTD CONDUCTED ON 29.12.2012**

S.No	Suggestions/Objections	Response from Project Proponent	Action Plan Along with Financial Budget	Compliance
1	<p>Sri TalapaguVenkata Ramana, SARD, NGO, Kotabommali</p> <p>He welcomed the project and stated that they are not against industrialization. There was migration of people in the area to Rangoon, Gujarat places for employment. He opined that, M/s Trimex industries has implement well as part of CSR activities. He requested the management to provide employment to skilled and unskilled people in the nearby area</p>	<p>Dr. N.L.Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and promised to continue the CSR activities with the same commitment in future also. He promised that they will provide jobs for the local people.</p>	<p>Action Plan</p> <p>Vocational training to youth. Employees will be provided with higher education facilities which will enhance their skills.</p> <p>Budget:</p> <p>MinimumRs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p>
2	<p>Sri BaratamNageswaraRao, Market Committee Chairman, Srikurmam</p> <p>He welcomed the project and stated that 7 to 8 Panchayats in the area are getting benefited due to M/s Trimex Industry. The</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and promised to continue with the same</p>	<p>Budget:</p> <p>MinimumRs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral</p>

	industry providing livelihood to labor and fisherman community	commitment in future also.		Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)
3	<p>Smt. Lopinti Lakshmi, Chintavalasa (v)</p> <p>She expressed her happiness and stated that the management is providing health facilities and treating ailments to the local villagers. She stated that, the management has provided medical facilities to 30 people of her village and also developing the schools in the area as a part of CSR activities.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and promised to continue with the same commitment in future also.</p>	<p>Budget: Minimum Rs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p>
4	<p>Sri RanaSrinivas, MPTC, Chintavalasa (v)</p> <p>He welcomed the project and stated that the management has provided employment, laying of roads and other facilities in the surrounding villages.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and promised to continue with the same commitment in future also.</p>	<p>Action Plan The management has assured that the development of road and other infrastructure facilities will also be taken up in their proposed CSR activities</p>	<p>Complied.</p>
5	<p>Sri TelukutiManohar, Pedavatsavalasa (v)</p> <p>He welcomed the project and informed that he was</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd</p>	<p>Action Plan The management has assured that the impact on the environment will be</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State</p>

	<p>at other places before the establishment of M/s Trimex sands and at present the company provided employment to him. He informed that there are no pollution problems in the industry premises during its operations. There is no sea water intrusion in this area; the quality is good at the well provided in their village. He also informed that the management has provided temple, medical facilities to the local people as a part of CSR activities.</p>	<p>expressed his thankfulness and promised to continue with the same commitment in future also.</p>	<p>maintained at minimum by taking all possible care and mitigation measures.</p> <p>Budget: Minimum Rs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p>
6	<p>Sri Tani Venkata Apparao, Peda Tulugu (v)</p> <p>He welcomed that project and stated that there is no problem due to existing operations of the industry and provided employment to the local people.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and promised to continue with the same commitment in future also.</p>	<p>Action Plan The management has assured that the impact on the environment will be maintained at minimum by taking all possible care and mitigation measures.</p> <p>Budget: Minimum Rs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p>

7	<p>Sri M. AnandaRao, Fisherman Community, Komaravanipeta (v)</p> <p>He expressed his grievance and stated that due to mining activity tsunami may come and this may affect their village first. He informed that the management has not provided any employment to their community. He stated that, the industry is carrying out mining activity in 10 acres of land in Tonangi village and has not provided any facilities under CSR activity. Finally, he requested the management to provide pension to the old people, drinking water and medical facilities to the nearby villagers. He opined that, most of the people migrating to Gujarat and other areas for employment due to lack of fish catch.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd informed that Tsunami would not arise due to sand mining and this industry is environment friendly unit and also informed that the management would look into the employment of people in Tonangi village in their expansion project.</p>	<p>Action Plan</p> <p>The management has assured that needs of their villages will also be taken in their proposed CSR activities. Budget: Minimum Rs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p>
8	<p>Sri T. SanthaRao, Tulugu (v)</p> <p>He stated that, M/s Trimex</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex</p>	<p>Action Plan</p> <p>The management has assured that needs of their villages will also</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State</p>

	Industry has done well in the area by implementing so many activities under CSR. He opined that, due to establishment of M/s Trimex industry migration of people for their livelihood is reduced. He welcomed the expansion of the proposed project.	Sands Pvt. Ltd expressed his thankfulness and promised to continue with the same commitment in future also.	be taken in their proposed CSR activities. Budget: Minimum Rs.2.0 Crores every year towards CSR activities. Timeframe: Every year	Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)
9	Sri Kurumana Appa Rao, Chintavalasa (v) He expressed his happiness and stated that M/s Trimex Industries has provided employment, medical facilities and requested the management to provide slab to Government school in their village.	Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and promised that the management would consider the suggestion given.	Action Plan The management has assured that needs of their villages will also be taken in their proposed CSR activities. Budget: Minimum Rs.2.0 Crores every year towards CSR activities. Timeframe: Every year	Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)
10	Sri Komara Korlayya, Komaravanipeta (v) He requested the management to provide 50 cents land to Ashramam and drinking water facility to their village.	The management would consider the suggestion given.		Not applicable under CSR activities.
11	Sri Koyyana Jagadeesh, Koyyanapeta (v)	The management after understanding	Action Plan The management has	Complied. 0.88 Crores spent towards CSR

	He expressed his grievance and stated that the nearby farmers have lost their crops and there are no developmental activities due to the operation of the industry. He requested to provide agricultural instruments to farmers.	the grievance said by the farmers has suggested that the necessary training in technical aspects will be provided to the local farmers and necessary guidance will also be provided by the local agricultural officers.	assured that needs of their villages will also be taken in their proposed CSR activities. Budget: MinimumRs.2.0 Crores every year towards CSR activities. Timeframe: Every year	activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)
12	Sri D. Simhadri, Tulugu (v) He requested the management to provide further employment in the expansion of the proposed project.	The management has already provided employment for 1200 people and promised to provide more employment for the proposed project.	Action Plan The management has assured that needs of their villages will also be taken in their proposed CSR activities. Budget: MinimumRs.2.0 Crores every year towards CSR activities. Timeframe: Every year	Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)
13	Sri Koyyana, Satyanarayana, Tulug (v) He requested the management to develop local panchayat and provide employment to women also in the industry.	The suggestions provided by the local panchayat has been accepted and it is committed to provide local employment to woman folk of the area,		Complied.

14	<p>Sri TelukutiAppaRao, Peda Vatsavalasa (v)</p> <p>He informed that, the industry has co-operated well to the farmers by giving water for their agricultural crops. He requested the management to take precautionary measures for control of pollution problems and to develop their area as part of CSR activities.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take all the precautionary measures for pollution problems and will develop their area as a part of CSR activity.</p>	<p>Action Plan</p> <p>Adequate protective measures will be taken up to avoid any pollution from the proposed activities. The management has assured that needs of their villages will also be taken in their proposed CSR activities. Budget: Minimum Rs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p>
15	<p>Sri. G. Vijay Reddy, READS, NGO, Hyderabad</p> <p>He opined that deeper mining activity may cause ground water pollution due to sea water intrusion. Management has to take necessary steps in filling the mined out area to reduce groundwater pollution. He also opined that, the use of 1, 800 KL of water per day from Vamsadhara River may cause water scarcity in the surrounding areas for</p>	<p>The management has suggested that a comprehensive hydrogeological study has been carried out by ENVID group of Andhra University and precautionary measures suggested in the report will be adhere to. All mined out pits would be refilled concurrently. Water is drawn from a point at Vamsadara river, where no water drawal for irrigation</p>	<p>Total capital cost and annual recurring cost towards pollution control measures/ monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>Complied. The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).</p>

	<p>agricultural and drinking water purposes. He requested the management to store rainwater and the stored water may use for industrial purpose. He suggested developing tree plantation on both sides of the roads to reduce air pollution. He also suggested providing separate fund to workers who are working in their factory for emergency use.</p>	<p>is existing downstream. Apart from that rainwater harvesting structures will also be developed in the project area and awareness creation will also be carried out in nearby villages to augment and catch the rainwater for future use.</p>		
16	<p>Sri KundiSuuryanarayana, Perlavanipeta (v), Ex-sarpanch</p> <p>He stated that the fisherman would be affected due to sand mining operations and further deepening of mining activity up to 4-5 m would affect the fishermen community.</p>	<p>The management informed that adequate measures will be adopted to minimize the impacts of mining operation on fishing activity.</p>	<p>Total capital cost and annual recurring cost towards pollution control measures/monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>Complied. The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).</p>
17	<p>Sri BandiRamu, Mugadalpadu (v)</p> <p>He opined that the industry is implementing the CSR activities in the nearby villages due to pollution problems from</p>	<p>The management informed that all the precautionary measures for pollution problems will be taken and will develop their area as</p>	<p>The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year. Total capital cost and</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining</p>

	<p>the industry operations. He expressed that the mining activity beyond 4 m, may cause pollution and other problems for the fishermen community. He also opined that, deeper mining activity may cause Tsunami to this area. He opined that, though there are skilled persons available in the area, the management is not providing employment to them. He expressed that, the old people in the area are suffering from joint pains and other ailments. He also felt that due to mining activity, the fisherman in this area is losing their livelihood.</p>	<p>a part of CSR activity. A comprehensive hydrogeological study has been carried out by ENVID group of Andhra University and precautionary measures suggested in the report will be adhere to. The management informed that adequate measures will be adopted to minimize the impacts of mining operation on fishing activity</p>	<p>annual recurring cost towards pollution control measures/ monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p> <p>The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).</p>
18	<p>Sri GunduRaghuram, Ex. MPP, Ampolu (v)</p> <p>He stated that the industry has put its effort in solving the difficulties of people in the nearby areas. He requested to provide further employment in expansion project also.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take all possible ways to improve employment and will develop their area as a part of CSR activity.</p>	<p>The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year.</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017)</p>

				(Annexure -21)
19	<p>Sri M. Krishna Murthy, Congress President, Gara (v)</p> <p>He stated that new industries are necessary for development of Srikakulam district. The people in this area are benefited due to establishment of M/s Trimex Industry and the management has provided infrastructure facilities to fishermen like construction of temple, school and hospital under CSR activities. He requested the management, that they should clear apprehensions of the people with regard to the mining activity and other problems. He finally requested to develop their villages in all aspects.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take all the precautionary measures for pollution problems and will develop their area as a part of CSR activity.</p>	<p>The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year.</p> <p>Total capital cost and annual recurring cost towards pollution control measures/ monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p> <p>The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).</p>
20	<p>Smt. Rangaraju Vani, Srikurmam (v)</p> <p>She stated that the management has taken up developmental activities in the area and the</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take</p>	<p>The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year.</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining</p>

	expansion of the project also would develop further in this area.	all means to develop their area as a part of CSR activity.		affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)
21	<p>Sri Neeranjalu</p> <p>He stated that the fisherman would be affected due to sand mining operations and further deepening beyond 4 m would further affect fishermen community. He opined that, the management is not providing employment to fisherman community due to lack of educational qualifications. He requested the management not to go beyond the deeper levels upto red sand.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd stated that the management will take all the precautionary measures for pollution problems and will develop their area as a part of CSR activity.</p> <p>The management informed that adequate measures will be adopted to minimize the impacts of mining operation on fishing activity</p>	<p>The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year.</p> <p>Total capital cost and annual recurring cost towards pollution control measures/ monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p> <p>The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).</p>
22	<p>Sri. K. Raju, MPTC, Srikurmam (v)</p> <p>He stated that</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his</p>	<p>The management has assured that need based CSR activities will be continued by</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95</p>

	<p>industrialization is necessary for development of this area. He opined that the people in this area are benefited due to establishment¹ of M/s Trimex Industry. He stated that the industry has provided infrastructure facilities like roads, temples, schools and hospitals. He requested the people not to fear on natural calamities like tsunami and other cyclones. He requested the management to develop for further to their area.</p>	<p>thankfulness and stated that the management will continue to develop their area as a part of CSR activity.</p>	<p>spending about Rs.2.0 Crores/year. Total capital cost and annual recurring cost towards pollution control measures/ monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p> <p>The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).</p>
23	<p>Sri Ganeswara Rao, Umaravalli (v)</p> <p>He stated that due to lack of industrialization there are no developmental activities in this area and migration for livelihood also increasing. He expressed that, the people in the area are benefited due to establishment of the M/s Trimex Industry and requested the</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take all the precautionary measures for pollution problems and will develop their area as a part of CSR activity.</p>	<p>The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year. Total capital cost and annual recurring cost towards pollution control measures/ monitoring, occupational health & safety, reclamation, green belt</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p>

	management to remove the silt in the irrigation canals to facilitate the irrigation water for 70 acres of agricultural land of their village.		development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.	The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).
24	<p>Sri M.saidu Reddy, President of Green Corps Society, Hyderabad</p> <p>He suggested the following to the management:</p> <ol style="list-style-type: none"> 1) Management should allocate CSR fund of 2-5% from the profits. 2) The management should provide greenbelt not only in the industry but in vacant lands to reduce pollution levels. 3) He praised the District Collector for involving in taking up of CSR activities with the industries for developing the 	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed that the management will take all possible means to address the demands and develop their area as a part of CSR activity.</p> <p>The budgetary allocation will be made as per the need based assessment carried out by the industry.</p>	<p>The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year.</p> <p>Total capital cost and annual recurring cost towards pollution control measures/monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p> <p>The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).</p>

	<p>Government hostels.</p> <p>4) The Management should provide computer training programmes to the local students and to educate them in all aspects.</p>			
25	<p>Sri Sunanda Reddy, NGO, Hyderabad</p> <p>She suggested the following to the management</p> <p>1) The study in the area was carried out as per 2001 census but report to be carried out as per censuses 2011</p> <p>2) The management proposed mining of 0.5 MTPA of raw sand by minor operations and 5.5 MTPA of raw sand by semi-mechanized method. The management should explore possibility of manual operations</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take all the precautionary measures for pollution problems and will develop their area as a part of CSR activity.</p> <p>Census 2011 data has not yet released by the Government. However, the available data from the internet regarding 2011 and primary need based assessment study carried out is utilized in developing the CSR activities in the area.</p>	<p>Need based CSR activities will be continued by spending about Rs.2.0 Crores/year.</p> <p>Total capital cost and annual recurring cost towards pollution control measures/monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p> <p>The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).</p>

	<p>so as to increase employment.</p> <p>3) The proposed BT roads in the project would be damaged in rainy season, so management should explore for laying cement roads.</p> <p>4) The Management should provide 3-5 crores towards welfare of fisherman community</p> <p>5) The management should co-ordinate and form a committee with local people for implementing SCR activities</p> <p>6) The management should develop greenbelt in 150 acres mined out land every year, so that the total mining area of 720 ha would be covered with greenbelt in 12 years.</p>	<p>The management has already involved APPCB, District Collector, Panchayat heads and local leaders in order to develop CSR activities in the study area.</p> <p>Entire mined out lands would be refilled and afforested in a scientific manner.</p>		
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26	<p>Sri Gopi, Peda Vatsavalasa (v)</p> <p>He welcomed the project and stated that the management should provide further employment to the local people in expansion project. He opined that the extra mining activity will also increase the life time of the project thus increasing employment opportunity to the local people. He also requested the management that they should facilitate the day to day monitoring activity so as to get an idea of sea water intrusion.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take all the precautionary measures for pollution problems and will develop their area as a part of CSR activity.</p>	<p>The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year.</p> <p>Total capital cost and annual recurring cost towards pollution control measures/ monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p> <p>The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).</p>
27	<p>Sri Tanmai, Engineering Student, Srikakulam</p> <p>He aggressively stated that after completion of his B.Tech, waited for one year for employment and finally employed in Madhya Pradesh which is far away from his native</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take all the precautionary measures for pollution problems</p>	<p>Action Plan</p> <p>Vocational training will be provided to youth. Employees will be provided with higher education facilities which will enhance their skills.</p> <p>Budget: Minimum</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY</p>

	place. He informed that he got employment in M/s Trimex Sands, he stressed industrialization is required for the development of the district and this may improve the infrastructure facilities in the local area. Finally, he requested the public not to oppose the industrialization for a cause of pollution and other issues.	and will develop their area as a part of CSR activity.	Rs.2.0 Crores every year towards CSR activities. Timeframe: Every year	2017-18 (up to September, 2017) (Annexure -21)
28	Sri Nagabhusanam He welcomed the project and stated that there is no problem with M/s Trimex industries and this will further develop the area.	Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take all the precautionary measures for pollution problems and will develop their area as a part of CSR activity.		Complied.
29	Sri P. PentaRao, President of Malamahanadu, Visakhapatnam He welcomed the project and stated that the people	Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will further develop their		Complied.

	<p>should invite industrialization by protecting the environment. He expressed that there is no objection from the people for the expansion of the M/s Trimex Industries, as they are doing developmental activities in the surrounding areas. He requested the management to provide minimum wages to the labor working in the industry as per wages act.</p>	<p>area as a part of CSR activity.</p>		
30	<p>Sri MaddelaChinnayya, Ex-MPTC, Vajrapukotturu (v)</p> <p>He expressed his happiness and stated that M/s Trimex Industry has developed the surrounding areas and there is need of such industry for betterment of the district.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take all the precautionary measures to control any pollution and will develop their area as a part of CSR activity.</p>	<p>The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year. Total capital cost and annual recurring cost towards pollution control measures/ monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21) The recurring expenditure incurred against the environmental protection</p>

				measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).
31	<p>SmtLaxmiNarasimha Devi, Ex-MPTC, Tonangi (v)</p> <p>She welcomed the expansion of the industry, as she opined that, there is no pollution problem due to operation of the industry. She requested to provide employment to Tonangi village.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will further develop their area as a part of CSR activity.</p>		Complied.
32	<p>Sri Guntu Laxmayya</p> <p>He expressed his grievance and stated that there would be pollution problems with the industry even though everybody is talking that there is no pollution from the industry. He opined that, the fishermen community would be affected due to operation of the sand mining activities. He stated that, the management has not provided single employment to their</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd stated that the management will take all possible precautionary measures for pollution problems and will develop their area as a part of CSR activity.</p>	<p>The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year. Total capital cost and annual recurring cost towards pollution control measures/monitoring, occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p> <p>The recurring expenditure incurred against the</p>

	village. He requested ¹ to provide employment to the coast line village people.			environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-27).
33	<p>Sri Gondu Krishna Murthy, Chairman, District Co-operative Consumer Market</p> <p>He invited the project and stated that the management should provide infrastructure facilities and to develop the area. He requested to provide further employment in all villages in the expansion of the project.</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will take all possible ways to develop their area as a part of CSR activity.</p>	<p>Need based CSR activities will be continued by spending about Rs.2.0 Crores/year.</p>	<p>Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -21)</p>



CSR Expenditure from Aril-2017 to September-2017		
S.NO.	Nature of Activity	Amount Spent Rs. (in Lakhs)
1	Self-Employment Training / Educational Infrastructure	21.28
2	Medical Facilities / Infrastructure	12.62
3	Community Welfare Schemes / Infrastructure	3.79
4	Infrastructure like Roads / Irrigation / Hostels	16.49
5	Sports	0.22
6	Donations / Sponsorships	13.26
7	Drinking Water Surrounding Villages	20.85
8	Contribution to District Mineral Foundation Trust	195.46
Grand Total :		283.97



Plantation Details

YEAR	TYPE OF SPECIES	No of Plants	
		Plan	Actual
Afforestation in Refilled areas:			
2017-2018 (up to Sep, 2017)	Eucalyptus, Casuarina, Acacia, Cashew	36805	70682
Green Belt :			
2017-2018 (up to Sep, 2017)	Casuarina, Acacia, Eucalyptus	5089	5106

Afforestation in Back filled Areas



Environment Monitoring Data Displaying Board





Annexure-24

Summary of Production Details

Particulars	2014-15	2015-16	2016-17	2017-18 (up to Sep, 2017)
Proposed Production				
RoM	3,517,273	5,091,473	5,963,801	2,998,901
Mineral Production				
Garnet	178,962	241,528	186,745	46,066
Sillimanite	164,366	220,321	166,488	36,528
Ilmenite	269,111	364,502	381,481	183,475
Rutile	11,470	15,807	14,816	6,314
Zircon	8,906	12,313	10,651	4,026
Total	632,815	854,471	760,180	276,409
Achieved Production				
RoM	1,994,656	2,957,422	4,188,534	2,064,583
Mineral Production				
Garnet	46,877	31,888	31,620	29,451
Sillimanite	33,801	42,409	37,109	25,124
Ilmenite	241,884	259,440	234,199	130,251
Rutile	6,433	6,325	6,562	4,222
Zircon	4,160	4,309	3,524	2,530
Total	333,155	344,371	313,014	191,578

TEAM**ORIGINAL**

Form-No. TCL/L/GF/E -138

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 Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
 Laboratory Recognised by Ministry Environment, Forests and Climate Change, Govt, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/6/0917

dt 05.10.2017

Description of Test:

Ambient Noise level Monitoring -Buffer zone

Name of the client:

Trimex Sands. PvtLtd.

Location of sampling:

As per details given

Date of monitoring:

20.09.2017

Time Hrs	Srikurmam	Pedda vatsavalasa	Komaravani peta	Chinna Tonangi
Noise levels indB(A)				
11.00	56.8	52.8	47.2	50.6
12.00	52.6	57.5	45.8	58.7
13.00	55.4	61.9	46.9	51.4
14.00	59.1	58.1	49.2	52.9
15.00	53.7	50.6	48.3	54.7
16.00	51.3	53.8	47.8	53.8
17.00	57.8	50.4	50.1	51.6
18.00	53.1	49.9	49.9	50.1

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TEST REPORT

Test Report No .TLC /V/Env/ TSPL/7/0917

dt 05.10.2017

Description of Test:

Ambient Noise level Monitoring -Core zone

Name of the client:

Trimex Sands Pvt. Ltd,

Location of sampling:

As per details given

Date of monitoring:

21.09.2017

Time Hrs	MSP- South East corner	MSP-North West corner	PCP-East gate	PCP-South West gate
Noise levels indB(A)				
09.00	50.5	51.4	56.8	59.9
10.00	49.2	53.8	51.2	59.1
11.00	47.7	50.6	49.5	61.3
12.00	45.1	52.5	46.9	63.6
13.00	49.5	54.3	48.6	59.2
14.00	52.1	52.4	49.2	60.2
15.00	60.5	51.9	51.4	59.8
16.00	46.4	53.5	53.9	61.6

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TEST REPORT

Test Report No .TLC /V/Env/ TSPL/6/0817

dt 06.09.2017

Description of Test:

Ambient Noise level Monitoring -Buffer zone

Name of the client:

Trimex Sands. PvtLtd.

Location of sampling:

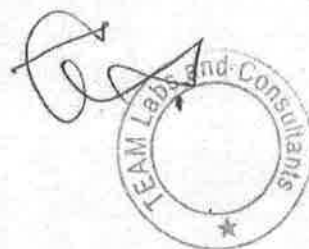
As per details given

Date of monitoring:

17.08.2017

Time Hrs	Srikurmam	Pedda vatsavalasa	Komaravani peta	Chinna Tonangi
	Noise levels indB(A)			
11.00	53.6	50.1	42.5	49.6

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TEST REPORT

Test Report No .TLC /V/Env/ TSPL/7/0817

dt 06.09.2017

Description of Test:

Ambient Noise level Monitoring -Core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

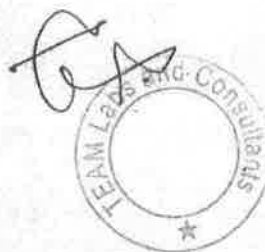
As per details given

Date of monitoring:

18.08.2017

Time Hrs	MSP- South East corner	MSP-North West corner	PCP-East gate	PCP-South West gate
Noise levels indB(A)				
10.00	49.0	55.0	55.3	49.2

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TEST REPORT

Test Report No .TLC /V/Env/ TSPL-N/02/0817

dt 06.09.2017

Description of Test:

Ambient Noise level Monitoring -Core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

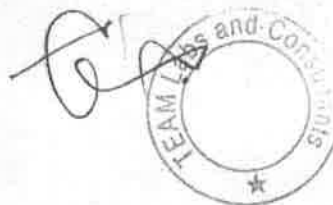
New PCP Plant ,Tonangi

Date of monitoring:

17.08.2017

Time Hrs	Security gate	DG Area
	Noise levels indB(A)	
12.00	48.9	57.2

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ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, Gol, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/6/0717

dt 05.08.2017

Description of Test:

Ambient Noise level Monitoring -Buffer zone

Name of the client:

Trimex Sands. PvtLtd.

Location of sampling:

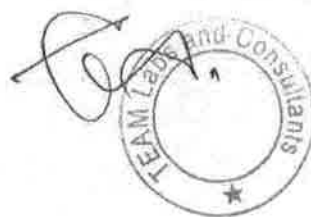
As per details given

Date of monitoring:

17.07.2017

Time Hrs	Srikurmam	Pedda vatsavalasa	Komaravani peta	Chinna Tonangi
Noise levels indB(A)				
11.00	54.8	51.0	43.8	50.2

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Labs and Consultants**Registered Office :****3040**

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.
Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, Gol, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/7/0717

dt 05.08.2017

Description of Test:

Ambient Noise level Monitoring -Core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

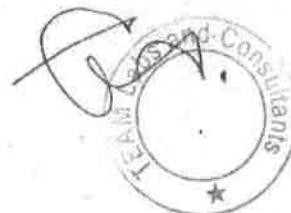
As per details given

Date of monitoring:

18.07.2017

Time Hrs	MSP- South East corner	MSP-North West corner	PCP-East gate	PCP-South West gate
Noise levels indB(A)				
10.00	48.6	55.0	56.0	49.2

For TEAM Labs and Consultants



Labs and Consultants

304

Registered Office :

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.
Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

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Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL-N/02/0717

dt 05.08:2017

Description of Test:

Ambient Noise level Monitoring -Core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

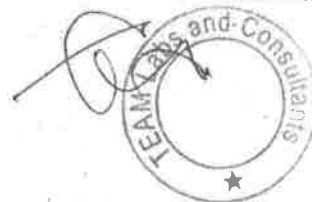
New PCP Plant ,Tonangi

Date of monitoring:

17.07.2017

Time Hrs	Security gate	DG Area
	Noise levels indB(A)	
11.00	50.1	59.3

For TEAM Labs and Consultants



Labs and Consultants**2323****Registered Office :**

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.

Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, Govt, New Delhi**TEST REPORT**

Test Report No .TLC /V/Env/ TSPL/6/0617

dt 05.07.2017

Description of Test:

Ambient Noise level Monitoring -Buffer zone

Name of the client:

Trimex Sands. PvtLtd.

Location of sampling:

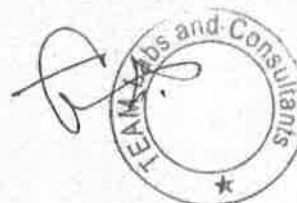
As per details given

Date of monitoring:

28.06.2017

Time Hrs	Srikurmam	Pedda vatsavalasa	Komaravani peta	Chinna Tonangi
Noise levels indB(A)				
11.00	54.1	49.8	41.6	48.3
12.00	52.9	47.1	43.9	46.8
13.00	56.2	46.9	41.5	46.2
14.00	54.8	49.2	45.3	47.4
15.00	56.1	47.5	44.8	50.1
16.00	55.3	48.3	40.9	48.3
17.00	54.2	49.2	49.3	46.9
18.00	56.8	50.6	48.1	44.3

For TEAM Labs and Consultants



Labs and Consultants**2826****Registered Office :**

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.
Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, Gol, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/7/0617

dt 05.07.2017

Description of Test: Ambient Noise level Monitoring -Core zone

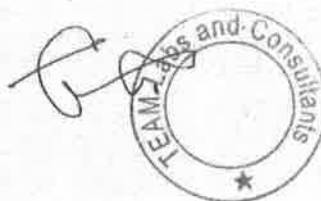
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: As per details given

Date of monitoring: 29.06.2017

Time Hrs	MSP- South East corner	MSP-North West corner	PCP-East gate	PCP-South West gate
Noise levels indB(A)				
09.00	49.5	54.5	51.3	48.6
10.00	48.1	54.6	54.9	47.5
11.00	49.7	56.2	58.6	43.9
12.00	47.4	58.3	52.4	46.8
13.00	48.5	55.1	54.7	47.1
14.00	47.2	53.5	56.1	45.8
15.00	46.4	57.8	58.4	46.3
16.00	45.9	54.9	56.3	47.8

For TEAM Labs and Consultants



Registered Office :

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.

Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization

Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL-N/02/0617

dt 05.07.2017

Description of Test:

Ambient Noise level Monitoring -Core zone

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

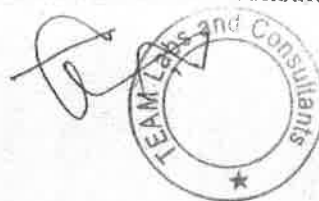
New PCP Plant ,Tonangi

Date of monitoring:

28.06.2017

Time Hrs	Security gate	DG Area
Noise levels indB(A)		
11.00	49.2	58.2
12.00	46.5	56.7
13.00	47.6	56.3
14.00	49.3	57.1
15.00	49.8	53.9
16.00	48.6	57.2
17.00	48.2	55.8
18.00	49.1	56.8

For TEAM Labs and Consultants



Registered Office :

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.

Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

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Laboratory Recognised by Ministry Environment, Forests and Climate Change, Govt, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/6/0517

dt 05.06.2017

Description of Test: Ambient Noise level Monitoring -Buffer zone

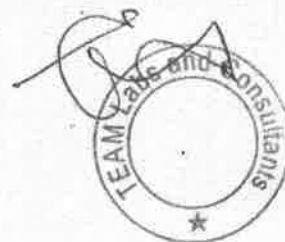
Name of the client: Trimex Sands. PvtLtd.

Location of sampling: As per details given

Date of monitoring: 15.05.2017

Time Hrs	Srikurmam	Pedda vatsavalasa	Komaravani peta	Chinna Tonangi
Noise levels indB(A)				
11.00	53.8	45.2	48.8	49.9

For TEAM Labs and Consultants



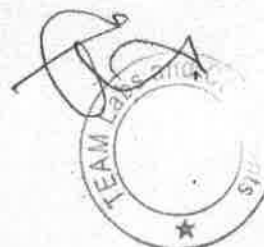
Registered Office :

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.
Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi

TEST REPORT**Test Report No .TLC /V/Env/ TSPL/7/0517****dt 05.06.2017****Description of Test:** Ambient Noise level Monitoring -Core zone**Name of the client:** Trimex Sands Pvt. Ltd.**Location of sampling:** As per details given**Date of monitoring:** 16.05.2017

Time Hrs	MSP- South East corner	MSP-North West corner	PCP-East gate	PCP-South West gate
	Noise levels indB(A)			
11.00	50.2	52.1	62.9	52.0

For TEAM Labs and Consultants

Labs and Consultants**2574****Registered Office :**

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.
Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ T\$PL-N/02/0517

dt 05.06.2017

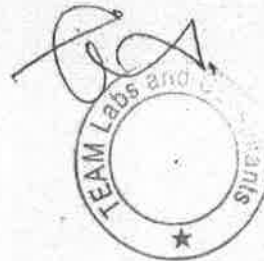
Description of Test: Ambient Noise level Monitoring –Core zone

Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: New PCP Plant ,Tonangi

Date of monitoring: 15.05.2017

Time Hrs	Security gate	DG Area
	Noise levels indB(A)	
13.00	51.0	63.3

For TEAM Labs and Consultants

Labs and Consultants**2381****Registered Office :**

B-115, 116, 117 & 509, Annapooma Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.

Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization
Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi**TEST REPORT**

Test Report No .TLC /V/Env/ TSPL/6/0417

dt 06.05.2017

Description of Test:

Ambient Noise level Monitoring -Buffer zone

Name of the client:

Trimex Sands. PvtLtd.

Location of sampling:

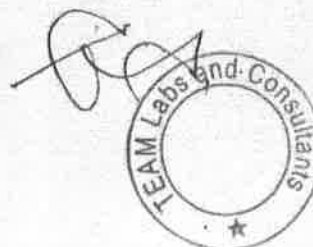
As per details given

Date of monitoring:

11.04.2017

Time Hrs	Srikurmam	Pedda vatsavalasa	Komaravani peta	Chinna Tonangi
	Noise levels indB(A)			
11.00	53.1	43.5	47.8	50.8

For TEAM Labs and Consultants



Labs and Consultants**2382****Registered Office :**

B-115, 116, 117 & 509, Annapoorna Block, Aditya Enclave, Ameerpet, Hyderabad - 530038.

Ph. : (O) 040-23748555 / 23748616, Fax : 040-23748666, Email : teamlabs@gmail.com

ISO 9001 : 2008, ISO 14001 : 2004 and OHSAS 18001 : 2007 Certified Organization

Laboratory Recognised by Ministry Environment, Forests and Climate Change, Gol, New Delhi

TEST REPORT

Test Report No .TLC /V/Env/ TSPL/7/0417

dt 06.05.2017

Description of Test: Ambient Noise level Monitoring -Core zone

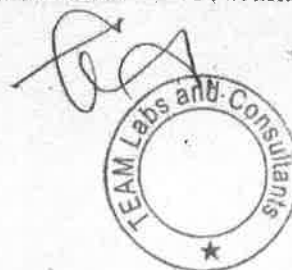
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: As per details given

Date of monitoring: 12.04.2017

Time Hrs	MSP- South East corner	MSP-North West corner	PCP-East gate	PCP-South West gate
	Noise levels indB(A)			
11.00	47.2	51.0	62.8	51.4

For TEAM Labs and Consultants





PPE's issues Report		
S.NO.	Material Description	Apr-17 to Sep-17
1	Safety Shoes	180 Pairs
2	Safety Helmets	184 Nos.
3	Nose Mask	711 Nos.
4	Respiratory Nose Mask	1237 Nos.
5	Ear plugs	11 Nos.
6	Safety Eye Goggles	71 Nos.
7	Caution Tape	13 Nos.
8	Asbestos Hand gloves	131 Pairs
9	Knitted Hand Gloves	42 Pairs
10	Leather Hand Gloves	6 Pairs



Expenditure for Environmental Measures

Recurring Expenditures		
S.No	Description	During the Period April,2017 - September,2017 (in Rs.)
1	Environmental Monitoring – Air, Water & Noise (outsourced).	0.86
2	Dust suppression on roads in factory	1.44
3	PPE cost for dust and sound (dust masks, ear muffs, etc.).	1.82
4	De dusting & Bag filter –addition of bag filter and maintenance.	0.12
5	Expenditure on refilling / pumping from PCP, leveling by dozer.	65.85
6	Slime management cost in mines.	337.37
7	Thickener Operation.	116.11
8	Afforestation, Nursery maintenance (Seeds, Saplings, Manure, Watering, Wages etc.)	173.70
9	Fencing 100mts from HTL	0.68
Total :		697.96

The Secretary,

1/ Vatsavalasa Grama Panchayat, Gara Mandal.

2/ Tonangi Grama Panchayat, Gara Mandal.

Dear Sir

Sub: Expansion of Srikurmam Mineral Sand Mine of M/s Trimex Sands Pvt. Ltd., Villages Vatsavalasa & Tonangi, Mandal Gara, District Srikakulam, Andhra Pradesh (720 Ha) (2.0 MTPA to 6.0 MTPA) – EC and CRZ Clearances - Regarding.

Ref:

1. Environmental Clearance issued by the Ministry of Environment, Forest and Climate Change, Impact Assessment Division, Govt. of India, vide letter F. No. 11015/175/2011-IA.II (M), Dt: 17-04-2015.
2. CRZ Clearance issued by the Ministry of Environment, Forests and Climate Change (IA. III Section), Govt. of India, vide letter F. No: 11-67/2013-IA.III Dt: 28-04-2015.

We wish to inform you for the expansion of Srikurmam Mineral Sands Project 2.0 MTPA to 6.0 MTPA) at Villages Vatsavalasa & Tonangi in Gara Mandal in Srikakulam District, Andhra Pradesh, the Ministry of Environment, Forests and Climate Change (MoEF), Impact Assessment Division, & IA.III Section, Govt. of India has granted the Environmental Clearance vide letter F. No: 11015/175/2011-IA.II (M), Dt: 17-04-2015 (enclosed as Annexure-1) and CRZ Clearance vide letter F. No: 11-67/2013-IA.III Dt: 28-04-2015 (enclosed as Annexure-2).

We are herewith submitting the copies of the same for your reference and record please.

Thanking You,

Yours Truly,

For Trimex Sands Pvt. Limited

Vice President (Mines)

Encl:

Annexure-1 : Environmental Clearance letter F. No: 11015/175/2011-IA.II (M), Dt: 17-04-2015

Annexure-2 : CRZ Clearance vide letter F. No: 11-67/2013-IA.III Dt: 28-04-2015

Trimex Sands Pvt Ltd:

Plot No. 56, Telugu Musalayaa Layout, Adithya Nagar, Arasavilli Road, Srikakulam-532001, Andhra Pradesh, India.
Telefax: +91 8942 229328, e-mail: trimexsklm@eth.net

Hyderabad Office:


#B-2-624, 2nd Floor, Sri Durga Towers, Flat No. 201, Road No.10, Banjara Hills, Hyderabad-500034, AP, India.
Tel: +91 40 2338 4380, +91 40 3371 3600, Fax: +91 40 2338 4068.

Reg. Office:

Trimex Towers, No.1, Subbaraya Avenue, C.P. Rama Swamy Road, Alwarpet, Chennai-600 018, India.
Tel: +91 44 2498 8813/22, Fax: 2498 6047 Web: www.trimexgroup.com

ACKNOWLEDGEMENT

Received Environmental Clearance Letter F. No: 11015/175/2011-IA.II (M), Dt: 17-04-2015, of Ministry of Environment, Forests and Climate Change (IA Division), & CRZ Clearance Letter F. No: 11-67/2013-IA.III Dt: 28-04-2015, of Ministry of Environment, Forests and Climate Change (IA III Section), Govt. of India has granted Environmental Clearance/ CRZ Clearance for Expansion of Srikurmam Mineral Sand Mine at Villages Vatsavalasa & Tonangi in Gara Mandal in Srikakulam District in Andhra Pradesh by M/s Trimex Sands Pvt. Ltd,

S.No	Name of the Office	Signature with Stamp
1	The Secretary, Vatsavalasa Gram Panchayat Office, Gara Mandal, Srikakulam District.	 4.5.15
2	The Secretary, Tonangi Gram Panchayat Office, Gara Mandal, Srikakulam District.	<p>RN9010075261N.</p> <p>बोमा नशी NOT INSURED</p> <p>एपवे गवे डाक रिक्वेस्ट का प्रत्येक</p> <p>Amount of stamps annexed is</p> <p>रु. पञ्चशती</p> <p>Received a registered</p> <p>सन्देश का प्रमाण</p> <p>Addressed to</p> <p>To the Secretary, Grama Panchayat</p> <p>2584</p> <p>तारीख भेजा Date Stamp</p> <p>प्रमाणित अधिकारी के</p> <p>Signature of Receiving Officer</p> <p>Trimex vatsavalasa</p>

30 April 2015



The District Collector
Srikakulam District

Respected Sir,

Sub: Expansion of Srikurmam Mineral Sand Mine of M/s Trimex Sands Pvt. Ltd., Villages Vatsavalasa & Tonangi, Mandal Gara, District Srikakulam, Andhra Pradesh (720 Ha) (2.0 MTPA to 6.0 MTPA) – EC and CRZ Clearances - Regarding.

Ref:

1. Environmental Clearance issued by the Ministry of Environment, Forest and Climate Change, Impact Assessment Division, Govt. of India, vide letter F. No. 11015/175/2011-IA.II (M), Dt: 17-04-2015.
2. CRZ Clearance issued by the Ministry of Environment, Forests and Climate Change (IA. III Section), Govt. of India, vide letter F. No: 11-67/2013-IA.III Dt: 28-04-2015.

We wish to inform you for the expansion of Srikurmam Mineral Sands Project 2.0 MTPA to 6.0 MTPA at Villages Vatsavalasa & Tonangi in Gara Mandal in Srikakulam District, Andhra Pradesh, the Ministry of Environment, Forests and Climate Change (MoEF), Impact Assessment Division, & IA.III Section, Govt. of India has granted the Environmental Clearance vide letter F. No: 11015/175/2011-IA.II (M), Dt: 17-04-2015 (enclosed as Annexure-1) and CRZ Clearance vide letter F. No: 11-67/2013-IA.III Dt: 28-04-2015 (enclosed as Annexure-2).

We are herewith submitting the copies of the same for your reference and record please.

Further, as stipulated under sub point (xiv) of point no.11 in EC & sub point (i) of point no. 7 in CRZ under General Conditions of the clearance letters, we hereby request to display the above clearance letters in your office notice board for 30 days.

Thanking You,
Yours Truly,
For Trimex Sands Pvt. Limited

30/04/2015
Vice President (Mines)

Encl:

Annexure-1 : Environmental Clearance letter F. No: 11015/175/2011-IA.II (M), Dt: 17-04-2015

Annexure-2 : CRZ Clearance vide letter F. No: 11-67/2013-IA.III Dt: 28-04-2015




Copy To:

- 1) AP State Pollution Control Board, Vizianagaram
- 2) The General Manager, District Industries Centre, Srikakulam.

Trimex Sands Pvt Ltd:	Plot No. 56, Telugu Musalayada Layout, Adithya Nagar, Arasavilli Road, Srikakulam-532001, Andhra Pradesh, India. Telefax: +91 8942 229328, e-mail: trimexsklm@eth.net
Hyderabad Office:	#B-2-624, 2nd Floor, Sri Durgam Towers, Plot No. 201, Road No.10, Banjara Hills, Hyderabad-500034 AP India Tel: +91 40 2338 4380, +91 40 3371 3600, Fax: +91 40 2338 4068.
Reg. Office:	Trimex Towers, No.1, Subbaraya Avenue, C.P. Rama Swamy Road, Alwarpet, Chennai-600 018 India Tel: +91 44 2498 8813/22, Fax: 2498 6047 Web: www.trimexgroup.com

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Received Environmental Clearance Letter F. No: 11015/175/2011-IA.II (M), Dt: 17-04-2015, of Ministry of Environment, Forests and Climate Change (IA Division), & CRZ Clearance Letter F. No: 11-67/2013-IA.III Dt: 28-04-2015, of Ministry of Environment, Forests and Climate Change (IA III Section), Govt. of India has granted Environmental Clearance/ CRZ Clearance for Expansion of Srikurmam Mineral Sand Mine at Villages Vatsavalasa & Tonangi in Gara Mandal in Srikakulam District in Andhra Pradesh by M/s Trimex Sands Pvt. Ltd.

S.No	Name of the Office	Signature with Stamp
1	Office of the District Collector & Magistrate, Srikakulam District.	
2	Office of the Environment Engineer, AP State Pollution Control Board, Vizianagaram.	
3	Office of the General Manager, District Industries Centre, Srikakulam.	



Annexure-30

TSPL/ENV/PCB/ES/2017-18/1107

Srikakulam,
27.09.2017.

To
The Joint Chief Environment Engineer
AP Pollution Control Board
Paryavaran Bhavan, A3, IE
Sanathnagar
Hyderabad-38

Dear Sir,

Sub: Environmental Statement - Form-V - 2016-17 - Reg.
Ref: APPCB/VSP/VZM/152/HO/GFO/2015 Dated 30.10.2015

As per the reference cited, please find herewith Environmental Statement in Form-V for the financial year 2016-17.

Thanking You

Yours faithfully

Sr. Vice President (Mining)

Cc:

The Environment Engineer, AP Pollution Control Board, Regional Office,
Plot no - 11, 1st floor, Shivaji Colony, Pradeep Nagar, Vizianagaram-535002

Trimex Sands Pvt Ltd: Vatchavalasa (V), Gara Mandal, Srikakulam District - 532 404, Andhra Pradesh, India.
Tel: +91 8942 283755, Fax: +91 8942 283758, email: info@trimexsands.com

Hyderabad Office: 2nd Floor, Sri Durga Towers, Plot No. 201, Road No. 10, Banjara Hills, Hyderabad - 500 034, Andhra Pradesh, India.
Tel: +91 40 2338 4380 / 3371 3600 Fax: +91 40 2338 4068

Reg. Office: Trimex Towers, No.1 Subbaraya Avenue, C.P. Ramaswamy Road, Alwarpet, Chennai - 600 018, Tamilnadu, India.
Tel: +91 44 2498 8822 / 8813 Fax: +91 44 2498 6047 web: www.trimexsands.com

CIN: U14299TN2004PTC071437

FORM - V
(See Rule 14)

Environmental Statement for the financial year ending with 31st March, 2017

PART - A

- (i) Name and Address of the Owner/ Occupier of the Industry
Operation or process
- M/S TRIMEX SANDS PVT. LTD.**
Vatsavalsa (V), Gara (M),
Srikakulam Dist - 532 404
- (ii) Industry category Primary
(SIC Code), Secondary -
(SIC Code)
- 1360, 1533 & 1595**
- (iii) Production capacity -
(Permitted quantity as per CFO)
- | S.No | Product | Quantity (TPD) |
|-------------|-----------------------|----------------|
| 1 | Ilmenite | 1100 |
| 2 | Sillimanite | 550 |
| 3 | Garnet | 550 |
| By Products | | |
| 4 | Rutile | 44 |
| 5 | Zircon | 44 |
| 6 | Mineral Rich Tailings | 260 |
- (iv) Year of establishment
- 2009 - 2010**
- (v) Date of the last environmental statement submitted.
- 13.08.2016**
(Vide Ir no TSPL/ENV/PCB/2015-16/1007)

PART - B

(i) Water consumption, m³/d :

Process :- 7960 KLD
Cooling :- - NA -
Domestic :- 16.19 KLD

Name of Product	Process Water Consumption in m3 per unit of products	
	During the Previous Financial Year 2015-16	During the Current Financial Year 2016-17
	(1)	(2)
Ilmanite, Rutile, Garnet, Zircon, Sillimanite.	8.40	8.06

ii) Raw Material Consumption:

Name of Raw Material	Name of Products	Process Raw Materials in tons per unit of products	
		During the Previous Financial Year 2015-16	During the Current Financial Year 2016-17
Beach Sand	Ilmanite, Rutile, Garnet, Zircon, Sillimanite	8.20	13.13

* Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

PART C

Pollution discharged to environment / unit of output (Parameter as specified in the consent issued)		
Pollutants Quantity of Pollutants Discharged (mass / day)	Concentration of Pollutants in discharges (mass/volume)	Percentage of Variation from prescribed Standards with Reasons
(a) Water :	There is no discharge from the industry. We set up a network of 7 observation wells within and outside the mining lease area and weekly monitoring is being done and observed that all the parameters are under permissible limit.	NA
(b) Air	Monthly Ambient Air Quality monitoring is being carried out within and outside the mining lease area (surrounding villages). Stack Emission Details Annexure I	NA

PART – D

HAZARDOUS WASTES

(as specified under Hazardous Wastes/Management and handling Rules, 1989)

Hazardous Wastes (Waste Lubricant Oil)	Total Quantity (lit)	
	During the Previous Financial Year 2015-16	During the Current Financial Year 2016-17
(a) From Process	2690	2520
(b) From Pollution control facilities	NA	NA

PART – E

SOLID WASTES:-

SOLID WASTES (silica sand tailings)	Total Quantity (tons)	
	During the Previous Financial Year 2015-16	During the Current Financial Year 2016-17
(a) From Process	23,74,980	37,39,014
(b) From Pollution Control Facility	NA	NA
(c)(i) Quantity to be recycled (Garnet & Sillimanite Concentrates) or reutilized within the unit.	65,527	56,174
(ii) Sold	NA	NA
(iii) Disposed	The above qty under (a) is backfilled at mined out area for reclamation and afforestation	The above qty under (a) is backfilled at mined out area for reclamation and afforestation

PART – F

Please specify the characterizations (in terms of composition and quantum) of hazardous as solid wastes and indicate disposal practice adopted for both these categories of wastes

S.No	Name of HW / Solid Waste	Quantity	Type / Nature	Mode of Disposal
1	Waste Lubricant Oil	2520 liters (2016-17)	Inflammable	Stored in closed barrels in designated area and disposed by sale to the authorized agencies.
2	Silica Sand Tailings	3739014 tones (2016-17)	Non hazardous in nature	The same qty is back filled at mined out areas for reclamation and afforestation.
3	Waste Batteries	62	Hazardous in nature	Used Batteries is being disposed to the authorized agency on buyback basis.

PART – G

Impact of the pollution abatement measure taken on conservation of natural resources and on the cost of production.

AFFORESTATION & GREEN BELT DEVELOPMENT AT PCP, MSP & MINING AREA

- 1) Captive nursery has been established at Mines
- 2) The nursery is manned by qualified personal and 21 full time workers are engaged from adjacent villages for Plantation.
- 3) Apart from the full time workers neighboring villagers are also engaged for nursery and Afforestation works. Among them mostly ladies are given opportunity to work.
- 4) Plantation details for the year 2016-2017 as follows

Types of species	PCP & MSP	Mining Area
Cashew	--	904
Eucalyptus	2,150	1300
Casuarina	1,240	107,888
Acacia	3,340	17,800
Palm Seeds	--	5,000
Forest tree variety (Gulmohar,Badam,Neem,Kanuga)	520	358
Total :	7,250	1,33,250

Expenditure on Pollution control measures and Conservation of Natural Resources

S.No	Description	During the Previous Financial Year 2015-2016 (in Rs.)	During the current Financial Year 2016-2017 (in Rs.)
1	Environmental Monitoring – Air, Water & Noise (outsourced).	65,000	1,30,0000
2	Dust suppression on roads in factory	2,08,000	5,48,000
3	PPE cost for dust and sound (dust masks, ear muffs, etc.).	2,96,000	3,36,000
4	De dusting & Bag filter –addition of bag filter and maintenance.	12,15,000	6,15,000
5	Expenditure on refilling / pumping from PCP, leveling by dozer.	68,85,000	1,58,02,000
6	Slime management cost in mines.	3,85,34,000	6,86,53,000
7	Thickener Operation.	1,37,90,000	2,26,65,000
8	Afforestation, Nursery maintenance (Seeds, Saplings, Manure, Watering, Wages etc.)	11,87,000	48,10,000
9	Fencing 100 Mts. from HTL	60,000	34,000
Capital Expenditure			
1	Thickener	8,27,08,000	--
2	Slime management cost in mines	44,59,000	--
3	Water recovery plant	4,06,73,000	--
	Total :	19,00,80,000	11,35,93,000

PART - H

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution.

Air Pollution Control Measures

- Mining area haul roads are being sprinkled with water periodically to ensure that there is no dust generation due to plying of vehicles.
- Bag filter efficiency is improved by changing bags of bag filter frequently and Bag filter efficiency tests are being carried out periodically and reports are being submitted to APPCB.
- Installed Water Treatment plant to treat the process water and thereby reduce dependability on river water. It is generating about 150 m³/hr of clean water.
- Concurrent backfilling of mined out area and Afforested with Casuarina, Acacia and Cashew done simultaneously to stabilize the soil and eliminate dust generation.

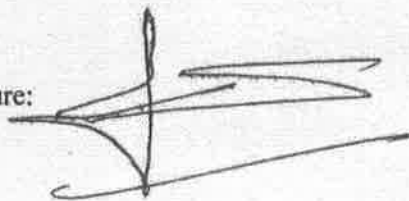
PART - I

Any other particulars for improving the quality of the environment.

- VFD (110 KW) arranged for Con-1 return water pump to reduce energy consumption.
- By conducting World Environment Day & Vanamahostavam day celebrations by massive plantation program.

Place: Srikakulam

Signature:



Date: 27-09-2017

Designation: Sr. Vice President (Mines)